

ANNUAL REPORT
of the
DEPARTMENT *of* SURGERY
1962

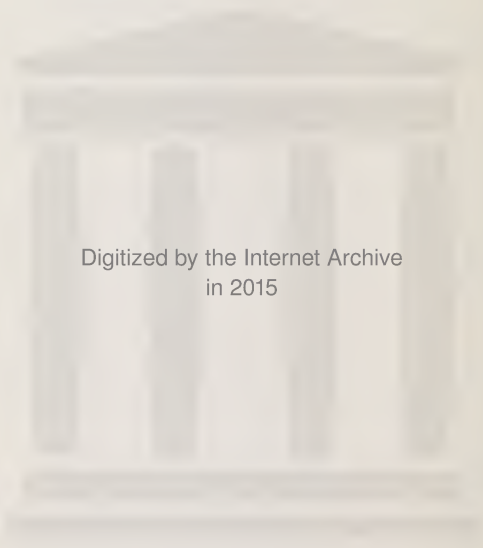


THE NEW YORK HOSPITAL-CORNELL MEDICAL CENTER
525 EAST 68TH STREET, NEW YORK 21, N. Y.

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ANNUAL REPORT
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DEPARTMENT OF SURGERY
The New York Hospital-Cornell Medical Center
1962

by FRANK GLENN, M.D.

S. W. MOORE, M.D.

JOHN M. BEAL, M.D.

To the President of the Board of Governors of the Society of The New York Hospital and the President of the Board of Trustees of Cornell University:

Again it is our pleasant obligation to present the annual report of the Department of Surgery. In 1962 the utilization of new and recently renovated facilities has increased the activities of its various divisions. In particular, the Outpatient Department has provided more thorough evaluation and more efficient care for a greater number of patients. The new research unit financed by the National Institutes of Health has afforded increased opportunities for detailed studies on selected patients. The broadening base of the ever-increasing field of surgery in diagnosis and therapy as its role in health grows raises the demand for personnel and equipment. The understanding, cooperation and encouragement of the governing bodies of the Center in meeting these current challenges are a stimulus to the members of the Department of Surgery.

Dr. John T. Ellis, Associate Professor of Pathology in Surgery, resigned on June 30 to accept the chairmanship of the Department of Pathology at Emory University in Atlanta. The department congratulates him on this recognition and expresses its appreciation for his able and efficient cooperation in recent years.

On December 31, Dr. Cranston W. Holman retired as chief of the Second (Cornell) Surgical Division of Bellevue Hospital. Dr. Holman had served with distinction since 1951. He will be succeeded by Dr. Richard C. Karl, who will devote full time to this program.

Dr. Archie Leigh Dean died on March 27. A graduate of Cornell University Medical College in 1917, he was Assistant Professor of Clinical Surgery (Urology) from 1933 to 1951. He was also associated with Memorial Hospital from 1919 to 1958, where he did most of the work in genitourinary cancer which brought him an international reputation. The standing of this Center was greatly enhanced by his contributions to urology and his services as a teacher.

RESIDENT STAFF

The complete list of resident staff appointments in surgery for the year 1962 follows:

GENERAL SURGERY

Resident Surgeons

AMES L. FILIPPONE, JR.....	May 1, 1961 to Apr. 30, 1962
JOSEPH P. DINEEN.....	Sept. 1, 1961 to Aug. 31, 1962
WILLIAM R. GRAFE.....	Jan. 1, 1962 to Dec. 31, 1962
FRANK G. MOODY.....	May 1, 1962 —
C. ELTON CAHOW, JR.....	Sept. 1, 1962 —

First Assistant Resident Surgeons

FRANK G. MOODY.....	May 1, 1961 to Apr. 30, 1962
C. ELTON CAHOW, JR.....	Sept. 1, 1961 to Aug. 31, 1962
CHARLES F. FREY.....	Jan. 1, 1962 to Dec. 31, 1962
CHARLES K. MCSHERRY.....	May 1, 1962 —
JULIUS CONN, JR.....	Sept. 1, 1962 —

Assistant Resident Surgeons

ROBERT E. L. CALHOUN.....	July 1, 1961 to June 30, 1962
STANLEY M. K. CHUNG.....	July 1, 1961 to June 30, 1962
JULIUS CONN, JR.....	July 1, 1958 to Aug. 31, 1962
GERALD T. COOK.....	July 1, 1961 to June 30, 1962
ROGER R. ECKER.....	July 1, 1958 to Dec. 31, 1962
WARREN W. KOONTZ, JR.....	July 1, 1958 to June 30, 1959
	July 1, 1961 to June 30, 1962
CHARLES K. MCSHERRY.....	July 1, 1958 to Apr. 30, 1962
RENEE B. O'SULLIVAN.....	July 1, 1961 to June 30, 1962
ALAN PAVEL.....	July 1, 1961 to Dec. 31, 1962
ROBERT C. RUNYON.....	Jan. 1, 1960 to June 30, 1962
ARTHUR M. AUERBACH.....	July 1, 1962 —
ARTHUR R. BEIL, JR.....	July 1, 1960 —
CARL M. BEILES.....	July 1, 1960 —
ARTHUR L. BOLAND, JR.....	July 1, 1962 —
GEORGE V. BURKHOLDER.....	July 1, 1961 —
ARMAND F. CORTESE.....	July 1, 1959 to June 30, 1960
	July 1, 1962 —
ARNOLD G. DIETHELM.....	July 1, 1959 —
THOMAS M. FULCHER.....	July 1, 1957 to June 30, 1959
	July 1, 1961 —
RANDOLPH H. GUTHRIE, JR.....	July 1, 1962 —
VINCENT M. HOGAN.....	July 1, 1962 —
ROBERT H. HORNE.....	July 1, 1961 —
O. ADRIAN JOHNSON.....	July 1, 1962 —
RALPH J. LEWIS.....	July 1, 1959 —
MELVIN G. LUND.....	July 1, 1960 —
J. RALPH MACFARLANE.....	July 1, 1961 —
J. BRUCE MCGOVERN.....	July 1, 1960 —
THOMAS H. MILHORAT.....	July 1, 1962 —
BENJAMIN S. PARK, JR.....	July 1, 1962 —
JOHN M. PITMAN, JR.....	July 1, 1960 —
JOHN C. SCHIEBLER.....	July 1, 1962 —
JOHN M. STEIN.....	July 1, 1962 —
KENNETH G. SWAN.....	July 1, 1961 —
ROBERT E. SWEAT, JR.....	July 1, 1962 —
DEAN H. WEAVER.....	July 1, 1962 —
WILLIAM A. WHITE.....	July 1, 1962 —
ERIC K. ZITZMANN.....	July 1, 1962 —

Interns

July 1, 1961 to June 30, 1962

ARTHUR M. AUERBACH
ARTHUR L. BOLAND, JR.
RICHARD D. CHAPMAN
FLOYD A. FRIED
RANDOLPH H. GUTHRIE, JR.
THOMAS H. MILHORAT
BENJAMIN S. PARK, JR.
MARSHALL P. REICH
JOHN C. SCHIEBLER
JOHN M. STEIN
ROBERT E. SWEAT, JR.
JOHN M. TEW
DEAN H. WEAVER
WILLIAM A. WHITE
ERIC K. ZITZMANN

July 1, 1962 to June 30, 1963

DONALD W. ABEL.....Cornell
JAMES W. ASAPH.....University of Oregon
JOHN V. BANTA.....Cornell
BRYANT BARNARD.....Cornell
EUGENE S. FLAMM.....University of Buffalo
JULIAN T. HOFF.....Cornell
WILLIAM P. McCANN...Georgetown University
ROBERT J. NEVIASER...Jefferson Medical College
ERNEST A. NOREHAD...University of Chicago
JOSEPH V. RAZIANO.....Cornell
J. RICHARD REES.....University of Utah
CHRISTOS ROMAS.....Cornell
NICHOLAS A. ROMAS.....Columbia University
ROBERT P. SENNELMANN...Albany Medical College
WILLIAM T. STUBENBORD.....Cornell
THOMAS L. TUTTLE.....University of Rochester
F. DARWIN ZAHN.....Cornell

Neurosurgery

WILLIAM S. OWEN, Resident.....July 1, 1961 to June 30, 1962
Assistant Resident.....July 1, 1959 to June 30, 1961
MAURY L. HANSON, Resident.....July 1, 1962 —
Assistant Resident.....July 1, 1960 to June 30, 1962
JAMES W. PREUSS, Assistant Resident.....July 1, 1961 —
RICHARD M. BERGLAND, Assistant Resident.....July 1, 1962 —

Ophthalmology

STANLEY L. HARRIS, Resident.....Jan. 1, 1962 to June 30, 1962
Assistant Resident.....July 1, 1959 to Dec. 31, 1961
JOHN C. ALDEN, Resident.....July 1, 1962 to Dec. 31, 1962
Assistant Resident.....July 1, 1960 to June 30, 1962
DAVID K. BERLER, Assistant Resident.....Jan. 1, 1962 to June 30, 1962
July 1, 1959 to June 30, 1961
WILLIAM F. KEARNEY, Assistant Resident.....July 1, 1960 to Dec. 31, 1962
JOHN T. FLYNN, Assistant Resident.....Aug. 1, 1961 —
GEORGE P. SANTOS, Assistant Resident.....July 1, 1961 —
RICHARD A. BARAGRY, Assistant Resident.....July 1, 1962 —
JOHN T. FISHER, Assistant Resident.....July 1, 1962 —

Oral Surgery

FREDERICK A. ROBINSON, Resident.....July 1, 1961 to June 30, 1962
THOMAS F. OWENS, Assistant Resident.....July 1, 1961 to June 30, 1962
SPIRO N. MASON, Assistant Resident.....July 1, 1962 —
Intern.....July 1, 1961 to June 30, 1962
MARTIN T. STEIN, Intern.....July 1, 1962 to June 30, 1963

Orthopedics

PATRICK J. BARRY, Assistant Resident.....Jan. 1, 1962 to Mar. 31, 1962
Apr. 1, 1960 to June 30, 1960
DONALD B. REIBEL, Assistant Resident.....Apr. 1, 1962 to June 30, 1962
July 1, 1960 to Sept. 30, 1960
RICHARD M. STARK, Assistant Resident.....July 1, 1962 to Sept. 30, 1962
Oct. 1, 1960 to Dec. 31, 1960
RONALD M. MATCH, Assistant Resident.....Oct. 1, 1962 to Dec. 31, 1962
Jan. 1, 1961 to Mar. 31, 1961
EDWARD J. CAREY, JR., Assistant Resident.....Jan. 1, 1962 to Mar. 31, 1962
EUGENE M. LANCE, Assistant Resident.....Apr. 1, 1962 to June 30, 1962
DAVID B. LEVINE, Assistant Resident.....July 1, 1962 to Sept. 30, 1962
HENRY H. SPRAGUE, Assistant Resident.....Oct. 1, 1962 to Dec. 31, 1962

Otolaryngology

PIERRE-PAUL GAGNON, Resident.....	July 1, 1961 to June 30, 1962
Assistant Resident.....	July 1, 1959 to June 30, 1961
REYNALD LAVOIE, Resident.....	July 1, 1961 —
Assistant Resident.....	July 1, 1959 to June 30, 1961
RAYMOND-MARIE GUAY, Resident.....	July 1, 1962 —
Assistant Resident.....	July 1, 1960 to June 30, 1962
PHILIP A. ZETTERSTRAND, Assistant Resident.....	July 1, 1960 —
REAL SASSEVILLE, Assistant Resident.....	July 1, 1962 —
JOHN H. SEWARD, Assistant Resident.....	July 1, 1962 —

Plastic Surgery

DAVID M. CONNELLY, Resident.....	July 1, 1961 to June 30, 1962
CHARLES B. DUNAIF, Resident.....	July 1, 1962 —
Assistant Resident.....	July 1, 1960 to June 30, 1961
DAVID W. FURNAS, Assistant Resident.....	July 1, 1961 to June 30, 1962
LEON I. BLOCK, Assistant Resident.....	July 1, 1962 —

Urology

MYRON P. WALZAK, Resident.....	July 1, 1961 to June 30, 1962
Assistant Resident.....	July 1, 1958 to June 30, 1961
JOHN R. WOODARD, Resident.....	July 1, 1962 —
Assistant Resident.....	July 1, 1959 to June 30, 1962
JOEL A. CLARK, JR., Assistant Resident.....	July 1, 1961 —
KAMAL T. HEMADY, Assistant Resident.....	July 1, 1961 —
EDWARD C. MUECKE, Assistant Resident.....	July 1, 1961 to June 30, 1962
FEDERICO ORTIZ Q., Assistant Resident.....	Jan. 1, 1962 —
GERALD T. COOK, Assistant Resident.....	July 1, 1962 —
WARREN W. KOONTZ, JR., Assistant Resident....	July 1, 1962 —

ADMISSIONS, OPERATIONS, AND DEATHS—1962

	Deaths				Autopsies			
	Oper.	Nonop.	Total		Yes	Per Cent	No	
<i>Pavilion Service</i>								
General Surgery.....	47	8	55	47 (3 M.E.)	85.5	8 (1 M.E.)		
Pediatric Surgery.....	9	—	9	8 (1 M.E.)	88.8	1		
Fracture.....	14	3	17	9 (3 M.E.)	52.9	8 (4 M.E.)		
Neurosurgery.....	8	2	10	7 (1 M.E.)	80.0	3		
Ophthalmology.....	—	—	—	—	—	—		
Oral Surgery.....	—	—	—	—	—	—		
Otolaryngology.....	1	—	1	—	—	1		
Plastic Surgery.....	1	2	3	2	66.7	1 (1 M.E.)		
Urology.....	9	2	11	6	54.9	5 (1 M.E.)		
	89	17	106	79	74.5	27		
<i>Private Service</i>								
General Surgery.....	35	12	47	26 (2 M.E.)	40.4	21		
Pediatric Surgery.....	4	—	4	4 (2 M.E.)	100.0	—		
Fracture.....	2	1	3	2 (2 M.E.)	66.7	1 (1 M.E.)		
Neurosurgery.....	16	—	16	13	81.3	3 (1 M.E.)		
Ophthalmology.....	—	—	—	—	—	—		
Oral Surgery.....	—	—	—	—	—	—		
Otolaryngology.....	—	—	—	—	—	—		
Plastic Surgery.....	1	—	1	1	100.0	—		
Urology.....	13	2	15	10	66.7	5		
	71	15	86	56	57.0	30		
<i>Semi-Private Teaching Service</i>								
Surgery I.....	20	4	24	19 (1 M.E.)	79.1	5		
	180	36	216	154 (15 M.E.)	68.0	62 (9 M.E.)		

GENERAL SURGERY

The number of admissions to the general surgical pavilions in 1962 was 1,666 which represented an increase when compared to the 1,632 admissions in 1961. The 1,670 operations were followed by 55 deaths, a mortality rate of 3.3 per cent. There were 8 deaths not associated with operation and 4 autopsies were performed in this group. Admissions to the semi-private teaching service numbered 980 and 848 operations were performed. There were 20 post-operative deaths, a mortality rate of 2.3 per cent. Autopsies were performed in 15. There were 4 deaths not associated with operation and 4 autopsies were performed in this group. During the year 2,198 private patients were admitted and 2,033 operations were performed. There were 35 post-operative deaths, a mortality rate of 1.7 per cent and autopsies were performed in 20. Non-operative deaths numbered 12 and autopsies were performed in 6 of these.

The development of percutaneous transhepatic cholangiography was the most significant achievement during the year, and was a joint project with the Department of Radiology. The method has been employed in more than 60 patients, immediately prior to operation in the majority. However, it has demonstrated a normal biliary tree in a small group of patients who would have been subjected to operation if this method had not been used. It may be possible to establish preliminary drainage in some patients who are deeply jaundiced and thus better prepare them for operation.

Cancer

The study of chemotherapeutic agents in the treatment of cancer continues in association with the Adjuvant Cancer Chemotherapy Program supported by the United States Public Health Service. As an adjuvant in surgical therapy these agents have been disappointing except in breast cancer, where the study has recently been expanded.

Regional therapy of antineoplastic agents has been investigated, employing regional infusion through a systemic artery. Under fluoroscopic control catheters can be placed in appropriate sites through the brachial artery without the necessity of operation in the majority of instances. Isolated perfusion of the lower extremity in the treatment of melanoma has shown encouraging results. This technique employs a tourniquet to isolate the circulation of the extremity, while the femoral artery and vein are connected to an extracorporeal circuit maintaining a high concentration of chemotherapeutic agent.

The Drug Evaluation Study under the guidance of Dr. John Beal, Dr. George Cornell and Dr. Bjorn Thorbjarnarson has continued to assess the efficacy of a number of agents against advanced cancer.

The Tumor Registry under the direction of Dr. George Cornell has accumulated sufficient data to become a valuable source of material for clinical research in neoplasia. This unit functions as a case finding facility and gathers statistics from the hospital. It is able to report upon the frequency with which the various types of cancer are encountered in the institution and is another valuable source of follow-up data.

Cardiovascular Surgery

Open heart surgery is performed regularly upon children on Tuesdays and adults on Thursdays. During the year the over-all mortality rate was reduced from 26 per cent in 1961 to 16 per cent in 1962, with approximately the same number of cases being performed in each year. A total of 257 open heart procedures were performed in 1962.

Perfusions of over two hours in length can now be safely accomplished with the improved extracorporeal circulation equipment. Selective cooling of the heart combined with moderate general body hypothermia and direct perfusion of the coronary arteries have made possible longer periods of cardioplegia. More careful and deliberate correction of defects of the aortic valve are now possible and this has set the stage for total aortic valve replacement. The mitral valve was replaced with a prosthetic valve on several occasions. Results in the open treatment of tetralogy of Fallot improved considerably during the past year. Correction of atrial septal defects and pulmonic stenosis continues to be highly satisfactory and without operative mortality.

Mitral commissurotomy continues to be the closed cardiac procedure most frequently performed. In addition to the primary operation for mitral stenosis, an increasing number of patients with recurrent stenosis of the mitral valve are being detected and operated upon for this late development. Most of these secondary operations were closed operations; a few with combined valvular lesions and/or clot required extracorporeal circulation. The number of operations performed for constrictive pericarditis, patent ductus arteriosus, coarctation of the aorta and shunting procedures (including intrapericardial shunts) for tetralogy of Fallot corresponded to previous years. Complete heart block was treated surgically on several patients by the implantation of a self-contained transistorized electrical pacemaker.

The effectiveness of the group concerned with cardiac surgery is the result of careful coordination and teamwork throughout all phases of

diagnosis, preparation for operation, actual operative procedure and after care both in the hospital and in the outpatient clinic. Dr. Frank Glenn, Dr. George Holswade, Dr. Frank Redo and Dr. Edward Goldsmith constitute the cardiac team. Their efforts are supported by Dr. Harold Stewart, Dr. Thomas Killip, and their associates from the Department of Medicine; Dr. Mary Allen Engle, Dr. Henry Goldberg, and staff from the Department of Pediatrics; Dr. Daniel Lukas and his colleagues from the Cardiopulmonary Laboratory; Dr. Joseph Artusio, Dr. Benjamin Marbury and other members of the Department of Anesthesiology; Dr. Israel Steinberg and Dr. Mordecai Halpern from the Department of Radiology; Dr. Robert Knapp from the Department of Obstetrics and Gynecology; Miss Jane Haber of the Blood Bank; and Dr. Aaron Kellner and Dr. Roy Bonsnes from the Central Laboratories.

Dr. S. W. Moore and Dr. George Wantz continue their aggressive treatment of abdominal aortic aneurysms. With a total experience of 129 patients, resection of the aneurysm has been carried out in 92. The operative mortality is as follows: non-ruptured aneurysms 7.3 per cent (82 patients—6 deaths); ruptured aneurysms 70.0 per cent (10 patients—7 deaths).

Malignant disease was noted in 27, or 21 per cent, of these 129 patients (cancer in 26). Dr. Moore and Dr. Wantz have found no previous reports of this interesting observation.

Trauma and Fracture

Dr. Preston A. Wade and Dr. Robert L. Patterson, Jr. continue their work on trauma patients with the assistance of Dr. Howard Balensweig, Dr. Robert L. Clarke and Dr. Leslie Rudolf.

Each patient has a separate roentgenogram reproduction file demonstrating the progress of the fracture or dislocation. This technique provides an invaluable documentation of the patient's course and also supplies material for teaching and publication.

Under the auspices of Cornell University Medical College the Seventh Annual Course in Trauma was given in June. The course included fifty lectures. Sessions were conducted by the faculty of the Cornell University Medical College and staff members of The New York Hospital and the Hospital for Special Surgery. Approximately one hundred surgeons from many states and countries attended the course.

The Fracture Conferences continue to be held on Tuesday evenings and are attended by the staff members from neighboring hospitals as well as our own staff and medical students.

Dr. Paul Skudder and Dr. James McCarroll of the Department of Public Health are continuing the survey of nonfatal pedestrian injuries in a group of selected hospitals in New York City. This study will complement a similar study of fatal pedestrian injuries published in 1961.

Dr. Wade, Dr. Skudder and Dr. McCarroll prepared a guide to the organization and management of the hospital emergency department which was published by the American Hospital Association.

On July first Dr. Skudder was appointed National Defense Coordinator of Medical Education for the Cornell University Medical College. The purpose of the M. E. N. D. Program, sponsored by the armed services, is to introduce into the curriculum those special subjects which medical graduates vitally need if they are to serve competently in the armed forces or in time of national emergency.

Pediatric Surgery

The pediatric surgical unit, under the direction of Dr. Frank Redo, assisted by Dr. Edward Goldsmith, enjoyed a very active year. Children from prematurity to 14 years of age presented a wide variety of surgical problems, including congenital anomalies of many types and malignant lesions as well as the more common conditions of hernia, trauma and appendicitis.

House staff rotations have remained unchanged with surgical residents assigned to the units for four-month periods. A senior surgical resident acts as pediatric surgical resident, aided by an assistant resident and an intern. The Department of Pediatrics assigns one senior and one junior assistant resident. One operating room on the eleventh floor is used for pediatric surgery. An outpatient clinic is held twice weekly, and weekly teaching rounds are conducted by an Attending Pediatrician and Dr. Redo, for the resident staff and medical students. Pediatric Surgery rounds are conducted by Dr. Redo Saturday mornings, attended by students, house staff, attending and visiting physicians. Each Thursday afternoon a pediatric surgical seminar is conducted by Dr. Redo for students and residents.

Admissions to Pediatric Surgery during 1962 totalled 530 patients, an increase of 23 per cent over 1961. There were 505 operations performed. Post-operative deaths occurred in 12 patients, 11 of whom had severe congenital cardiovascular or gastrointestinal anomalies, a mortality rate of 2.4 per cent. Autopsies were performed on 11 of the 12 patients who died.

Among the pediatric surgical problems studied during the year, Dr. Charles Frey and Dr. Redo reported on their experience with acute pancreatitis in infancy and childhood; Dr. Roger Ecker and Dr. Redo described an intrapericardiac aortico-pulmonary shunt for cyanotic heart disease; Dr. Charles McSherry and Dr. Redo investigated achalasia in childhood, and Dr. Redo with the aid of Dr. Joseph Dineen studied the institutional experience with pyloric obstruction due to a mucosal diaphragm.

NEUROSURGERY

DR. BRONSON S. RAY, Attending Surgeon in Charge

Dr. Ray had the valuable assistance of Dr. Herbert Parsons, Dr. Howard S. Dunbar, Associate Attending Surgeon (Neurosurgery) and Dr. R. H. Patterson, Jr., Assistant Attending Surgeon (Neurosurgery); Dr. William S. Owen as Chief Resident through June 30; Dr. Maury Hanson as Chief Resident from July 1st; Dr. James Preuss, First Assistant Resident, and Dr. Richard Bergland who joined the staff on July 1st as Second Assistant Resident.

Admissions to the Neurosurgical Service in 1962 totalled 652 patients, which may be compared with 619 admissions in 1961. Operative procedures performed on 641 patients totalled 965 (982 in 1961). There were 26 deaths (24 post-operative and 2 non-operative)—an operative mortality of 3.7 per cent. Permission was granted for 21 autopsies (87 per cent).

Mercury head scanning has been used as an adjunct in the localization of brain tumors since July 1. The isotope is administered intravenously as Neohydrin (Hg^{203}) and is counted with a Picker photoscanner. Fifty-six patients have been scanned so far; 28 had brain tumors and of these 26 had positive "scans" which localized the tumor. Two patients with cerebrovascular accidents had positive "scans." The results have been very gratifying and suggest that mercury scanning will continue to be a valuable addition to neurosurgical diagnostic procedures.

Dr. Patterson, Jr. has continued the investigation of methods to arrest cerebral circulation for prolonged periods for bloodless intracranial surgery.

Total hypophysectomies performed for advanced carcinoma and other diseases since this study was begun eight years ago is now approximately 600. Remissions for disseminated carcinoma of the breast and prostate are established at about 40 per cent; post-operative mortality remains at less than one per cent. Eighteen cases of hypophysectomy for acromegaly, often with dramatic regression of the disease, have been reported. A similar report on the first 14 cases of hypophysectomy for diabetic retinopathy is at present in preparation.

Satisfactory results have been obtained in selected cases of surgical treatment of Parkinsonism, dystonias and other kinetic disorders by the placement of appropriate lesions in the ventriculolateral nucleus of the thalamus or the globus pallidus.

Under a grant from the National Institutes of Health, the neurological and neurosurgical sections of The New York Hospital and the Cornell Division at Bellevue Hospital, in a group study with 14 other university centers, have continued to pool data on subarachnoid hemorrhage and aneurysms for evaluation of the effectiveness of different forms of treatment. An increased number of patients can thereby be offered definitive surgery to prevent recurrent bleeding.

OPHTHALMOLOGY

DR. JOHN M. MCLEAN, Attending Surgeon in Charge

Dr. Edward A. Dunlap is Dr. McLean's immediate associate. During the year Dr. Miles A. Galin left private practice to devote himself to full-time research and teaching. He was awarded a five-year grant from the Health Research Council of New York City as a Career Scientist on a full-time basis for fundamental research in ocular dynamics and fluid and pressure balance.

Dr. David Berler completed his residency June 30, and is now on active duty at the Walter Reed Army Hospital. Dr. Stanley Harris also completed his residency June 30 and entered private practice. Dr. John Alden and Dr. William Kearney became senior residents. Dr. John Flynn and Dr. George Santos continued as assistant residents and Dr. Richard Baragry and Dr. John Fisher joined the staff as assistant residents. Dr. Hugo Nano, after a year at his own University in Argentina, returned on a fellowship from the National Council to Combat Blindness for another year in ophthalmic research. Dr. Rafeal Cavero joined the staff as a research assistant. The attending staff remains unchanged.

The clinical service continues its steady trend of increasing activity. there were 1,122 patients admitted to the Eye Service as compared to 1,005 admissions in 1961. Of these 409 were admitted to the pavilion service and 416 operations were performed. Private patient admissions numbered 713 with 698 operations. The total number of admissions and operations per year has almost doubled in the past 10 years and is over twenty times the average annual number in Dr. George Heuer's five year study of 1938. This increase reflects several factors. Primary among them are the improved surgical methods in managing cataract, glaucoma, strabismus and retinal detachment, many of them pioneered at this Center.

Others include the increasing ocular problems reflecting the increasing longevity of the population, ability to care for more patients as better techniques reduce the individual hospital stay and, perhaps, increased insurance coverage. This last factor is responsible for a major increase in semi-private admissions. The annual number of pavilion admissions has remained about constant over the past decade but the ratio of pavilion to private cases has been reversed from about 5:4 to about 1:2. This increase has come about without any increase in the attending staff and with an increase in outpatient visits of only approximately 7 per cent.

Research activities increase steadily with intensive studies in the areas of glaucoma, visual loss and reading disabilities in childhood, and new attacks on detached retina and intraocular tumor. The "suction cup" method of measurement of aqueous circulation has been refined to a highly useful clinical test for diagnosis and quantitative evaluation of glaucoma and for better selection of operative procedures.

ORTHOPEDICS

DR. T. CAMPBELL THOMPSON, Attending Surgeon in Charge

Patients with orthopedic and arthritic problems are treated in the Hospital for Special Surgery. The outpatient clinics continue to be busy and the hospital has maintained more than 85 per cent occupancy.

Dr. J. Paul Harvey resigned to take a position as Associate Professor of Orthopedic Surgery at the University of Southern California. Dr. George Carpenter, Dr. Peter-Cyrus Rizzo, III, Dr. Patrick Barry, Dr. Donald Reibel and Dr. Thomas Rizzo completed their residency training during the past year.

Dr. Philip D. Wilson resigned as Director of Research of the Philip D. Wilson Foundation in the Caspary Research Unit June 30. He has been succeeded by Dr. Goran Bauer of Malmo, Sweden, Professor of Surgery (Orthopedics).

The staff has been active in a number of investigative problems. Dr. L. Ramsay Straub studied the surgical treatment of the rheumatoid foot and was awarded first prize in the Section on Rheumatoid Diseases at the Annual Meeting of the American Medical Association. Dr. John R. Cobb reported on indications for spine fusion. Charcot joints were studied by Dr. Sidney Eichenholz. Dr. Philip Wilson, Dr. Philip Wilson, Jr. and Dr. Bernard Jacobs reported their experience with slipped capital femoral epiphysis.

OTOLARYNGOLOGY

DR. JAMES A. MOORE, Attending Surgeon in Charge

Dr. James Holman and a senior staff of seven capably assist Dr. Moore. Dr. Raynald Lavoie was appointed Second Year Resident July 1. Dr. Pierre-Paul Gagnon completed his resident training June 30 and returned to Quebec to enter private practice. He was succeeded as Resident by Dr. Raymond Guay. Dr. Philip Zetterstrand was appointed third year assistant resident. Dr. John Seward joined the staff as first year assistant resident.

Admissions totalled 1,305 during the year. The number of operations increased to 1,047 in comparison to 1961, when 973 operations were performed. Major procedures included 88 stapedectomies, 15 myringoplasties and 13 modified radical and radical mastoidectomies. In addition 12 mobilization operations were performed. There were 3 laryngectomies, one laryngofissure, two hemimandibulectomies, one with supradigastric resection, and one radical neck dissection. Tonsillectomies and/or adenoidectomies were performed in 636 patients.

More than 2,600 examinations were carried out in the Speech and Hearing Center, a figure comparable to 1961. In cooperation with the State Conservation of Health Program in the Physically Handicapped Children Program the Center follows more than 75 children on an active basis.

PLASTIC SURGERY

DR. HERBERT CONWAY, Attending Surgeon in Charge

Dr. Conway has had the able support of Dr. James Smith, Dr. Dicran Goulian and Dr. Merton Griswold. Dr. David Connelly completed his residency training June 30 and joined the staff of the State University at Syracuse. He was succeeded by Dr. Charles Dunaif as resident. Dr. Renee O'Sullivan served a year as assistant resident and left June 30 to spend a period of time at the University of Indonesia at Jakarta. Dr. Leon Block joined the staff as assistant resident July 1.

Two hundred forty-two patients were admitted to the pavilion service and had 336 operations. There were two deaths, one non-operative. Private admissions numbered 540 and there were 652 private operations. Autopsies were performed in one post-operative death and one death not associated with operation.

The admission of approximately equal numbers of congenital anomalies, traumatic cases including burns, neoplasms, and physical deformities for

cosmetic correction has helped to maintain a strong teaching and training service. Members of the staff have had a number of special interests during the year, and many reported these at national meetings. Dr. Conway and Dr. Goulian developed a new technique for the repair of soft tissue defects by means of an injectable form of silicone rubber (silastic). These investigators also formed a maxillary orthopedic clinic for the clinical evaluation of maxillary orthopedics and bone grafting in the care of congenital cleft lip and palate deformities. An analysis of twenty years of experience in the treatment of cleft palate was completed.

Dr. Smith improved the technique for the application of pedicled tissue to the hand and has been studying the use of the dissecting microscope in the repair of peripheral nerves. This form of microdissection and suture enables the surgeon to achieve a high degree of accuracy in reconstruction.

UROLOGY

DR. VICTOR F. MARSHALL, Attending Surgeon in Charge

Dr. John McGovern and Dr. John Keuhnelian assist Dr. Marshall. Dr. Myron Walzak completed his resident training June 30 and departed for active military service. Dr. John Woodard was appointed resident July 1. Dr. Gerald Cook and Dr. Warren Koontz began their residency training in urology July 1. Dr. Edward Muecke began a year of study in the Department of Embryology at the Carnegie Institute July 1. Dr. Kamal Hemady and Dr. Joel Clark continued as assistant residents during the year.

Genitourinary malformations in children was a field of particular activity. Dr. McGovern and Dr. Marshall completed a review of reimplantation of the ureter into the bladder in children. Dr. Marshall, with the help of Dr. Muecke, studied the variations of exstrophy of the urinary bladder. Dr. Muecke and Dr. Guido Currarino of the Department of Radiology have studied the pelvic bones in patients with exstrophy of the bladder. Dr. Woodard and Dr. Koontz investigated voiding mechanisms in children in the hope of devising a reliable test for patients suspected of having vesical neck obstruction. Dr. Cook analyzed renal anomalies in association with undescended testes. Dr. Marshall and Dr. McGovern made chromosomal studies in three cases of true hermaphroditism with the aid of Dr. James L. German, III of the Rockefeller Institute.

Two cases of chyluria were investigated by means of lymphangiography with the aid of the Department of Radiology. Further work on the development of the fiberoptic cystoscope was carried out and during the year

a stone in the ureter at the pelvic brim was visualized by the transurethral passage of one of the flexible instruments.

ANESTHESIOLOGY

Dr. JOSEPH F. ARTUSIO, JR., Anesthesiologist in Chief

Dr. Artusio has had the support of 11 attending anesthesiologists and 17 residents. Dr. Benjamin Marbury is in charge of anesthesia in Obstetrics and Gynecology and Dr. Marjorie Topkins of the nurse anesthetists. Dr. Robert Schrier supervises equipment and statistics. Dr. Charles W. Quimby, who finished his residency training at the University of Minnesota, joined the staff July 1 as an assistant attending anesthesiologist.

Dr. Alan Van Poznak left his clinical duties July 1 to devote his attention to research. On that date he began a year in the Department of Pharmacology, during which period he will pursue pharmacologic investigations. Dr. Richard Knapp, Dr. Liebert Turner and Dr. Peter Yu completed residency training and entered military service July 1. They have been assigned posts as anesthesiologists, Dr. Knapp at the Naval Hospital in Portsmouth, Virginia, Dr. Turner in the United States Air Force Hospital, Madrid, Spain, and Dr. Yu with the United States Army in Korea.

Research in hydrocarbons and ethers for anesthesia continues. Dr. Van Poznak has been studying the effect of anesthesia at the nerve terminal. Dr. Artusio and Dr. Topkins continue their interest in the relationship between anesthesia and the occurrence of coronary occlusion and cerebrovascular accidents in surgery. An interim report appeared this year.

Dr. Herbert Erlanger has initiated a study of the effect of anesthesia, the introduction of cold solutions and their effect on the body temperature of surgical patients.

The summary of principal anesthetics and techniques is as follows:

Cyclopropane.....	3,166	
Ether, semi-closed circle.....	1,309	
Ether, open.....	360	
Nitrous Oxide.....	996	
Intravenous pentothal.....	58	
Rectal pentothal.....	7	
Vinethene.....	33	
Regional block for surgery.....	41	
Spinal.....	159	
Epidural and caudal.....	79	
Fluothane.....	1,211	
Penthrane.....	955	
Fluomar.....	2	
Investigative anesthetics.....	45	8,421

Locals O. R.	2,922	
Blocks O. R. and Clinic (therapeutic and diagnostic).....	17	
Locals Clinic.....	414	
Adjuvants—electroshock therapy.....	76	3,429
		11,850
Private patients.....	6,947	
Pavilion patients.....	4,903	
		11,850

SURGICAL PATHOLOGY

DR. JEAN E. TODD, Pathologist in Charge

Dr. Todd has been ably assisted by Dr. William Johnson. Dr. John Ellis, who directed surgical pathology until July 1, resigned to accept the Chairmanship of the Department of Pathology at Emory University, Atlanta, Georgia.

Members of the resident staff from general surgery, pathology, radiology and ophthalmology receive training in surgical pathology. More sets of microscopic slides are now available for instruction.

The number of specimens processed by the surgical pathology laboratory again increased. There were 11,084 in comparison to 10,547 in 1961. Much of this is due to the increased use of needle biopsies in the Department of Medicine, especially of the bone marrow and kidney. Frozen section was utilized in 676 operative consultations. A total of 1,589 photographs were taken in the operating room and of specimens in the laboratory. The new photography equipment has improved the quality of operative specimen pictures. Renovation of the histology laboratory made possible the processing of 34,187 routine slides and 2,425 research slides.

OPERATING ROOMS

MISS DOROTHY ELLISON, R.N., Head of Operating Room Nursing Service

Miss Ellison has had the able support of:

MRS. LUCY HICKEY, Supervisor of the Private Operating Room
 MRS. WANDA BURLEY, Supervisor of the General Operating Room.
 MISS GLADYS JONES, Supervisor of the Recovery Room
 MISS ANNA ONDOVCHICK, Supervisor of the Teaching Program

Operations and treatments increased during the past year. There were 17,267 procedures in the operating rooms in comparison to 17,063 in 1961. During the fall months, a shortage of nursing personnel resulted in curtailment of the use of the general operating room. However, staff

cooperation and careful scheduling enabled utilization of the facilities so that the number of patients operated upon was essentially unchanged.

During the summer months the installation of the piped gases, oxygen and nitrous oxide, was completed in the general operating rooms as was renovation of the corridors.

Operating Room Committee

Members: Dr. John M. Beal, Chairman; Miss Dorothy Ellison, Secretary; Dr. Joseph Artusio; Dr. Peter Dineen; Dr. William Sweeney; Dr. Philip Wilson, Jr.; Dr. John McGovern; Miss Jean Sherman; Dr. August Groeschel; Mr. James O'Connell; Mr. William Walton.

The Operating Room Committee continues to function as a group which reviews and supervises the function of the operating rooms. The actions of the Committee are submitted to the Medical Board for approval and implementation.

Supervision of standards in the operating rooms is one of the chief concerns of the Committee. Regular inspections are conducted by Dr. Dineen, Miss Ellison, Dr. Mannix with the assistance of Dr. Guida and members of the hospital administrative staff. This leads to a high level of maintenance and cleaning in the operating rooms.

Operating costs continue to represent a much studied problem. The rise in cost of equipment, supplies and labor has resulted in increased expenses for maintaining standards within the operating rooms. The Committee has reviewed the use of the most expensive items and, with the cooperation of the nursing staff, has attempted to institute conservative measures. Disposable drapes are being investigated as a possible means of reducing laundry costs.

The operating room policy manual was again reviewed this year and the revised edition brought up to date. After approval by the Medical Board, it will be made available to the staff.

LABORATORIES FOR SURGICAL RESEARCH

Activities in the laboratories have been severely curtailed during the past year due to construction of the Wood Building. Much of the planned investigation has awaited completion of laboratory space or the vivarium. The construction being nearly complete by the end of the year, it was

possible to begin utilizing the laboratory space on the sixth floor. These laboratories will be devoted to studies of homotransplantation, surgical bacteriology, hypothermia, anesthesia, ophthalmology, cardiovascular disease, liver disease and gastrointestinal problems. A new sterilizing room has been included to aid these endeavors.

Dr. John Beal is responsible for the direction of the laboratories and has been greatly aided by Dr. Peter Dineen and by Dr. Helena Gilder. Dr. Gilder is in charge of the biochemical section of the laboratory. Dr. Dineen has coordinated efforts in the construction of the new laboratory space in the Wood Building.

Gastrointestinal Research

Dr. William A. Barnes and Dr. Frank Redo have attempted to isolate and identify the substance recoverable from gastric juice which inhibits peptic activity. A technique of sugar crystallization is being used in an attempt to obtain the inhibitor in pure form. In addition, work has begun on a means of determining peptic activity using micro-techniques.

Dr. Barnes, Dr. Redo and Dr. Roger Ecker continue their studies of replacement of the esophagus and have utilized tubes constructed of chemicized collagen with outer reinforcing rings of semi-rigid plastic materials.

Dr. Helena Gilder and Dr. Frank Moody investigated the effect of aldosterone on fasting and stimulated Heidenhain pouch gastric juice. The relationship between the secretion of potassium and hydrochloric acid in the stomach is now under scrutiny. The data suggest that the potassium output is directly proportional to hydrogen ion output. Dr. Moody has been conducting studies on the isolated gastric segment. He found that secretion of gastric juice is related to blood flow rates and it is hoped that more specific data can be collected with improved technical procedures.

Dr. Henry Mannix conducted a study of gastric secretion in response to endotoxin and to pyelonephritis. Endotoxin was found to depress gastric secretion. The effect of infection is not clearly established, although there appear to be some changes in the gastric mucosa.

Dr. Bjorn Thorbjarnarson, working with Dr. Mary Anne Payne of the Department of Medicine, is studying the composition of bile. Lipid and bile acid levels, as well as cholesterol content, are being determined under normal and pathologic conditions.

Cardiovascular Research

Dr. George Holswade has been developing an improved pacemaker. The exact motion of the wire leads has been studied by cinefluoroscopy and an instrument is under construction which is designed to test the leads. An induction pacemaker which can be implanted against the heart is also being studied. Dr. Edward Goldsmith and Dr. Holswade have sought improvements in a technique for extracorporeal circulation providing more prolonged circulation and greater safety, particularly in the management of more complicated problems. Dr. Goldsmith is interested in improving precision in the work on the heart and great vessels. He has been able to obtain striking improvement in visibility by means of a fiberoptic light which lights the interior of the heart. He is continuing his studies of thermal dilution as an indicator of blood supply of the heart, kidney, bone and dental tissue.

Dr. Redo and Dr. Roger Ecker are devising methods for by-pass of the right ventricle in correcting transposition of the great vessels. Recent emphasis has been on determining the effects of pulmonary artery pressure on pulmonary artery flow.

Dr. Redo is designing a mechanical substitute to replace the entire heart. Problems of venous drainage and hemolysis offer the greatest difficulty and require modification of the pumping mechanism. Work continues on the isolated perfused heart for evaluating cardiac physiology. The effect of increasing coronary perfusion pressure on coronary artery flow was evaluated. Flow appeared to be dependent upon the degree of cardiac activity rather than upon coronary artery perfusion pressure.

With Dr. S. W. Moore and Dr. George Wantz, Dr. Peter Guida has undertaken studies on blood flow in arteries and veins. Dr. Guida constructed a complex electromagnetic blood flowmeter containing 85 tubes and 10 transistors. Its principle of operation is based upon Faraday's Law of Electromagnetic Induction. The practical application is as follows: the artery is placed within the instrument-generated magnetic field and, since blood is a conductor and is moving through the magnetic field, a voltage is generated proportional to the velocity of the blood, permitting determination of the actual blood flow in milliliters per minute. This instrumentation is basic to many problems in vascular surgery and the physiology of organs as related to blood flow. The advantage of the flowmeter is that the vessel need not be punctured or cut, nothing is inserted into the blood stream and the subject need not be anticoagulated. Blood flows have been determined in almost all vessels. This technique of blood flow measurement has been very revealing and some unsuspected and surprising new data on blood flow are being accumulated.

Surgical Metabolism

The opening of the DuBois Research Facility at The New York Hospital in April has given great impetus to the surgical metabolic studies. This unit is devoted to clinical studies and is supported by the United States Public Health Service. Projects are subject to the approval of a research committee headed by the director of the facility, Dr. E. Lovell Becker of the Department of Medicine. The surgical representative on the committee is Dr. John Beal. The research pavilion is staffed by nurses and dietitians who are trained in investigative procedures. The following projects are being undertaken at the present time:

Gastrointestinal absorption after surgical procedures which involve the gastrointestinal tract is being investigated by Dr. John Beal, Dr. George Cornell and Dr. Helena Gilder. Metabolic balance methods are used and compared with tracer substances for fat and protein absorption.

The metabolic effects of cancer chemotherapy have been studied by Dr. Cornell and Dr. Beal. Patients receiving cancer chemotherapeutic agents are observed using metabolic methods.

Energy exchange in surgical patients has been approached through the use of an expired air analyzer. After a number of modifications, a satisfactory procedure for calibration and operation of the instrument was devised, so that it has been possible to study eight patients.

Studies of bile composition and bile flow have been carried out by Dr. Frank Glenn and Dr. Bjorn Thorbjarnarson, in association with Dr. Mary Anne Payne of the Department of Medicine. The effect of dietary variations upon serum and bile composition is the subject of investigation. A catheter has been constructed which allows the creation of temporary intermittent total biliary diversion in patients with common duct drainage. This promises to be a useful tool in the determination of bile flow.

Surgical Bacteriology

Dr. Peter Dineen has continued the study of the mechanism of penicillin resistance in vivo by staphylococci. It is now apparent that the penicillinase system is not a simple one but is comprised of at least two enzymes and an activator. Dr. Mannix has joined Dr. Dineen in an investigation of the method by which bacterial infection of bile occurs in common duct obstruction. The findings indicate that the main route is through the portal venous system. Support of clinical areas continues to be important in the laboratory. Various skin disinfectants for surgical scrubbing and germicides for environmental sanitation are being tested.

Homotransplantation

Research in this field has been particularly handicapped by the construction. The laboratories were disrupted and the tissue culture room dismantled. Despite these problems, a number of interesting observations were made.

Dr. Leslie Rudolf has begun the establishment of a laboratory devoted to studying homotransplantation of organs. Thymectomies in newborn animals have been done to better define the role of the thymus in immunologic competence in early life. It is hoped to determine what causes the wasting disease to which the young succumb after thymectomy. The feasibility of influencing the rejection of tissues by using cytotoxic drugs in addition to thymectomy is also the subject of further study.

Dr. Ronald Gillette, with the assistance of Miss Angelica Findlay, has maintained skin from both experimental animals and man in an organ culture system and treated the colony with steroids in an effort to describe and alter the physiology of the skin. Dr. Gillette has been studying the effects of antiproteolytic enzyme factors on the rejection of normal and tumor tissues. Factors such as epsilon-amino-n-caproic acid and soy bean trypsin inhibitor when injected into the host prolong the survival of skin homografts. These agents also permitted the initial growth of an adenocarcinoma in host animals normally resistant to this tumor. These studies suggest that proteolytic enzymes may participate in the immune reaction of homotransplants of normal and of tumor tissue.

Dr. Dicran Goulian reported upon the role of connective tissue in the acquisition and mediation of homograft sensitivity.

Neurosurgical Research

Dr. Russel H. Patterson, Jr., continues to seek methods of arresting cerebral circulation for prolonged periods so that bloodless intracranial surgery can be performed. The technique of profound hypothermia has been improved through the use of blood stream cooling with extra-corporeal pump-oxygenator apparatus. Attempts to decrease the incidence of cardiac arrhythmias by means of an antihistaminic drug has not been successful. The drug appears to act only in association with myocardial depression. The effect of alteration of hydrogen ion concentration of the blood seems more promising and it is possible that this may lead to profound hypothermia without the need of extra-corporeal circulation.

Dr. Patterson is exploring the problem of circulatory arrest with the cooperation of the medical research laboratory of the United States Submarine Base in Groton, Connecticut. The period of circulatory arrest that

is tolerated under hyperbaric oxygenation is the area of investigation, with and without hypothermia. The chief problem in these studies is the elaborate facility required.

Urologic Research

Dr. John Keuhnelian is studying the hematopoietic activity of the bone marrow produced by transplantation of bladder mucosa. With Dr. Richard Silver of the Department of Medicine, he has extended the investigation to include the effects of androgens on this system. Dr. Keuhnelian continues his interest in the experimental production of solitary renal cysts. The problem remains of developing an experimental system uniformly successful in the creation of cysts in a functioning kidney.

Dr. Keuhnelian and Dr. George Cornell have attempted to produce the nephrotic syndrome experimentally. Renal vein ligation and thrombosis have been utilized in an effort to simulate the clinical situation.

Dr. John Draper, with the assistance of Dr. Edward Goldsmith, continued to study renal blood flow by means of the thermal probe.

Miscellaneous Studies

Dr. Paul Skudder and Dr. Edward Goldsmith investigated the blood supply of the femoral head before and after fracture of the femoral neck. Change in temperature within the femoral head after injection of cold saline was employed as a means of assessing blood flow.

Dr. Henry Mannix studied tissue tolerance of a new hemostatic agent experimentally. The material has been well tolerated and the effectiveness of its hemostatic properties will be tested in the future. Dr. Mannix is evaluating two proteolytic agents designed for treatment of thrombophlebitis.

Dr. Irving Baras and his associates are studying a group of enzymes with selective digestive properties for use in the eye. Dr. McLean and his group have accumulated data suggesting that controlled low temperature may replace diathermy in detached retina surgery. A series of new synthetic drugs for regulation of intraocular pressure is also being investigated.

ORAL SURGERY

DR. GEORGE F. EGAN, Attending Oral Surgeon in Charge

For the last six months of 1962 the outpatient activities of Oral Surgery were radically curtailed because of structural changes being made in the clinic facilities. In spite of this, a full range of patient care was carried out and the resident training program maintained.

A ten-year report was given at the Annual Scientific Session of the American Dental Association on the continued research in implantation of magnets in the jaw to aid denture retention. Animal research was initiated in the use of sclerosing agents to fix oral mucosa to the underlying structures, providing a more satisfactory base for denture retention.

Research in oral surgery on patients maintained on anticoagulants was completed. A report of 260 procedures successfully carried out on these patients was presented to the first International Conference on Oral Surgery held in London in July.

Cinefluorographic studies of jaw movements and dentures in function are being continued.

OUTPATIENT DEPARTMENT

DR. S. W. MOORE, Attending Surgeon in Charge

The Surgical Outpatient Department consists of fourteen clinics and is conducted in close cooperation with all other outpatient facilities.

Surgical Diagnostic Clinic

In this clinic patients new to the hospital have a complete work-up. Patients referred from other parts of the hospital are seen in consultation. Third year medical students obtain their introduction to surgery here by taking histories and examining these patients with senior surgeons.

The Surgical Proctology Clinic is a part of this diagnostic area. Due to poor patient preparation of the rectum and sigmoid at home, it will be better to carry this out in the clinic. Additional toilet facilities have been planned to make this feasible.

The Gastrectomy Clinic under Dr. Beal's direction also centers here. Patients are watched carefully following gastrectomy and, when treated with chemotherapy for cancer, require carefully controlled laboratory work.

Minor Surgery Clinic

Ambulatory surgical patients are seen in this clinic, including those needing surgical dressings or treatment following discharge from the Inpatient Service. Third year medical students under the direction of senior surgeons care for patients together with the surgical house staff.

In order to acquaint the surgical house staff with minor foot problems, the Foot Clinic, previously directed by a podiatrist, is now conducted by the house staff in conjunction with senior consultants from the Hospital for Special Surgery.

Nerve Block Clinic

The Nerve Block Clinic under the supervision of the Department of Anesthesiology offers diagnostic and therapeutic nerve blocks on an out-patient basis. The patients are cared for by the resident staff in anesthesia who see, evaluate and manage the outpatients and receive instruction from the attending anesthesia staff. During the past year over fifty diagnostic or therapeutic procedures were performed, including stellate, ganglion, intercostal and paravertebral somatic and sympathetic blocks. In addition, causalgia problems were considered. At present the Nerve Block Clinic is improving its record keeping so that valid statistical analyses can be made.

Ophthalmology

The sub-specialty clinics dealing with glaucoma, uveitis, low vision, strabismus and retinal detachment continue giving detailed study and care to these particular problems. The special study of selected cases of reading difficulty started last year has resulted in uncovering a small number of apparently minor muscle imbalances which have been amenable to surgical correction. Motor imbalances of this degree are usually considered too small for operation, but in these cases their successful correction has resulted in marked improvement in reading ability and dramatic increase in the academic performance of these school children. Long term follow-up will be necessary, but early evaluation is extremely encouraging. This study will be pursued under Dr. Edward Dunlap's direction.

Also under his direction, and with the financial support of a grateful patient, a new section of pleoptics has been added to the orthoptic department for further treatment of difficult cases of amblyopia.

A special contact lens clinic has been started under the direction of Dr. Elizabeth Constantine to teach residents the intricacies of these techniques. Emphasis is placed on the use of therapeutic lenses, but a limited number of cosmetic cases are accepted for educational purposes.

Otolaryngology

Through our Speech and Hearing Center, we are cooperating with the State of New York Department of Health, Bureau of Medical Rehabilitation and Bureau of Handicapped Children and, in connection with the State conservation of hearing program, approximately 75 hard of hearing children are followed regularly. These children receive complete audiological work-ups and speech therapy is carried out when necessary. Interdepartmental consultations are available and conferences with the consultants are held every month. Nineteen children are being followed

on an inactive basis and 12 children have been closed out of the program after completion of their work-up or referral to local agencies.

In the Speech and Hearing Center, 2,402 audiograms were done this year and there were 936 patient visits for speech therapy.

The third year medical students spend one afternoon clinic session each week for ten successive weeks in the Outpatient Department. Two instructors are assigned to each group of nine or ten students to expedite their instruction. During this time the students are first taught the use of the various diagnostic instruments and procedures, including the use of the head mirror, nasopharyngoscope, transilluminator and laryngeal mirror. Later they are given the opportunity of examining new patients under the supervision of an instructor. Every attempt is made to see that each student has the opportunity to see follow-ups on various operative procedures and as wide and complete a selection of cases as possible.

During the year 1962, 2,973 new patients were seen in the Ear, Nose and Throat Clinic, and a total of 13,980 patient visits were made.

Plastic Surgery

In 1962 there has been little change in the total number of clinic visits or visits and operations in the minor surgery clinic as compared to previous years. The number of visits to speech therapy is much lower than formerly, due to a vacancy in this position. With a new speech therapist it is expected that the number of visits for the year 1963 will be similar to that of former years.

Orthodontic consultations and treatments have shown a definite increase over the figures for 1961. This is due to the additional assistance of Dr. Irvin Prince as a consultant to our orthodontic staff. We are now able to provide a better service to more patients.

A clinical investigation is in progress on the long term evaluation of cleft lip and cleft palate operations. This study will include a review of the operative procedures performed and the results of speech therapy and orthodontic care. It will provide a guide to the general progress which we have made between the years 1942 and 1962.

Urology

Work in the urological outpatient department continues to increase. All nine cystoscopic rooms are now equipped for radiographic studies. A special unit for instrumental and radiographic examinations of children is being planned. A gift of \$10,000 will aid in the formation of this unit.

Dr. Edwin Drew is studying the effect of local instillation of chemotherapeutic agents upon histologically proven superficial bladder neoplasms.

Emergency Unit

Reflecting the opening of the new Emergency Unit in November, 1961, Emergency Unit registrations in 1962 totalled 25,808, an increase of 3,499 or 11.6 per cent over 1961. This is compared with an increase of 1.5 per cent in the previous year. Four per cent of registrations in 1962 were private cases compared with 2.5 per cent in 1961. Ten per cent of registrations were compensation cases compared with 6 per cent in 1961.

Registrations in the Emergency Unit by service were as follows:

General Surgery . . .	36.0%	Pediatrics	15.0%
Fracture	4.6%	Other Services . . .	16.4%
Medicine	28.0%		

Of the total number of patients registered in the Emergency Unit, 3,517, or 13.6 per cent, were admitted to the hospital.

Surgical Follow-up Clinic

The Surgical Follow-up Clinic is vital to the work of the surgical department and continues to function in a highly efficient and orderly way.

We are fortunate in having Mrs. DeFranco as head of this unit. Mrs. McDermott has been ably replaced by Miss JoAnne McSweeney. Unfortunately Mrs. Coleman, who has been with us many years, is planning to leave shortly. The new office on the eighteenth floor has provided a most pleasant change and much needed extra space.

All material is up to date, with 9,842 patients currently being followed. During the year 764 cases were closed, including deaths, and 977 new cases added. This shows an increase of 213 in the total of patients being followed.

Fracture

Attendance has increased in the Fracture Outpatient Department in 1962. During the four weekly sessions an attending surgeon is present with the residents, making special effort to show the medical students examples of fractures in the early stages of treatment. Nearly all students have the opportunity to witness or take part in the reduction of a fresh fracture.

Continuation of the Sunday Follow-up Clinics has provided many X-ray reproductions (5" x 7") for each patient's fracture envelope. These records constitute valuable clinical research material. Presently 684 patients are being followed. 473 new cases were added and 501 closed during 1962.

Pediatric Surgery

The Pediatric Surgery Clinic is conducted Tuesday and Thursday afternoons in the Pediatric Clinic. During 1962, 590 patients were seen,

an increase of 75 per cent over those examined in 1961. Most of these were infants and children who had undergone surgery and returned for short term follow-up. The late Pediatric Surgery Follow-up Clinic is held once a month in conjunction with the general surgery follow-up clinics. A total of 317 patients is currently on file for this clinic. Preliminary surgical evaluation of pediatric patients is done on a consultation basis by one of the pediatric surgical residents on call to the General Pediatric Clinic.

Minor surgical procedures on pediatric patients are performed in the Minor Surgery Clinic on K-6. These children are subsequently followed in the Pediatric Surgery Clinic. Infants and children who arrive at the hospital with surgical problems after clinic hours or with emergent conditions are seen by the senior pediatric surgery resident in the Emergency Unit.

SPECIAL GRANTS AND DONATIONS FOR SURGICAL RESEARCH

U. S. Public Health Service:

General Surgery.....	\$ 74,169.00
Plastic Surgery.....	41,458.00
Ophthalmology.....	35,043.00
Neurosurgery.....	23,115.00
Cardiac Surgery.....	22,332.00
Trauma.....	15,847.00
Max C. Fleischmann Foundation—Urology.....	100,000.00
Department of the Army—Surgical Bacteriology.....	52,475.00
Dr. and Mrs. B. H. Kean—General Surgery.....	21,521.93
Health Research, Inc.—Cancer Research.....	21,510.00
Altman Foundation—Plastic Surgery.....	15,000.00
William A. Phillips—Urology.....	10,636.18
Squibb Institute for Medical Research—Neurosurgery.....	10,100.00
Anonymous—General Surgery.....	10,000.00
Dunnington Foundation—Urology.....	10,000.00
Lillia Babbitt Hyde Foundation—Surgical Metabolism.....	10,000.00
Robert Sterling Clark Foundation—General Surgery.....	10,000.00
N.Y. City Health Research Council—Biochemistry.....	8,104.00
E. H. and Suzanne Little Foundation—Biliary Tract Research.....	5,000.00
N.Y. City Society for Crippled Children and Adults—Plastic Surgery.....	5,000.00
P. W. Skogmo Charitable Trust—Orthopedic Surgery.....	5,000.00
Mrs. George E. Vigouroux, Jr.—Biliary Tract Research.....	5,000.00
Mrs. Francis M. Weld—Surgical Metabolism.....	4,987.50
Seth Sprague Foundation—Otolaryngology.....	4,500.00
National Council to Combat Blindness—Ophthalmology.....	4,500.00
Dr. and Mrs. Frederick L. Liebolt—Orthopedic Surgery.....	4,000.00
American Cancer Society—General Surgery.....	3,750.00
Susan Greenwall Foundation—General Surgery.....	3,000.00
Edwin J. Hoffritz Foundation—Ophthalmology.....	3,000.00
Major Foundation—Orthopedic Surgery.....	3,000.00
Mr. and Mrs. L. F. McCollum—Biliary Tract Research.....	2,727.14
—Ophthalmology.....	2,727.14
Lever Bros.—Surgical Bacteriology.....	2,000.00
Mrs. Cyrus McCormick—Otolaryngology.....	2,000.00
J. J. O'Neill Foundation—Plastic Surgery.....	2,000.00
Textron Pharmaceuticals—Surgical Bacteriology.....	2,000.00
John Wolf—Urology.....	1,615.00

Morris Brecher—General Surgery.....	\$1,541.96
Albert Gordon Benevolent Fund.....	1,500.00
Johnson & Johnson—Surgical Bacteriology.....	1,500.00
Rudy C. Steifel—Trauma Research.....	1,072.50
Abbott Laboratories—Anesthesiology.....	1,000.00
Herman W. Block Fund—Urology.....	1,000.00
Daniel Dowd—Ophthalmology.....	1,000.00
Mrs. Hamilton Hadley—General Surgery.....	1,000.00
Robert L. Werner—Biliary Tract Research.....	1,000.00
Harder Foundation—Urology.....	750.00
Preston A. Wade—Trauma Research.....	592.09
Mrs. Mary Boyd Ryland—Otolaryngology.....	500.00
Upjohn Company—Surgical Bacteriology.....	500.00
Anonymous—Surgical Bacteriology.....	500.00
Ronald F. Lee—Urology.....	500.00
Mr. and Mrs. John J. Halfaker—Pediatric Surgery.....	500.00
Mrs. Willing Spencer—Trauma Research.....	500.00
Miscellaneous:	
Otolaryngology.....	1,525.00
Cancer Research.....	811.00
Ophthalmology.....	515.00
Plastic Surgery.....	445.00
Orthopedic Surgery.....	402.50
General Surgery.....	310.00
Urology.....	200.00
Trauma.....	175.00
Neurosurgery.....	46.50
Total.....	<u><u>\$576,504.44</u></u>

GENERAL COMMENTS

Each year sees increased activity in the Department of Surgery. Pursuit is evident; success or failure in attainment of objective is often difficult to assess at close range. Thus it is that an annual report is primarily a chronicle of events, whereas comments and attempts at evaluation are secondary and only time can determine the extent of accomplishment. Patient care, in terms of hospital days, reached a new high not only for surgery but for the entire hospital. Many of these patients have had the benefit of diagnostic and therapeutic measures not previously available. The extremes of life—the premature, the infant, the aged, and the individual approaching the 100 mark—afford examples of relief of conditions of an incapacitating nature that requires correction if life is to be extended. Accomplishments in these fields derive from our most potent instrument in clinical training and teaching: the degree of productivity of research pursuit in this Center or elsewhere. Continuity of advancement requires the efficient use of new and modern facilities by thoughtful, well trained personnel dedicated to the welfare of mankind.

FRANK GLENN, M.D.

S. W. MOORE, M.D.

JOHN M. BEAL, M.D.

PUBLICATIONS—1962

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CLASSIFICATION OF OPERATIONS (PAVILION)

Department of Surgery

FLAPS, GRAFTS		Complete excision of nail.....	2
Split thickness graft.....	63	Local excision of steatoma.....	1
Cutting of pedicle or tube.....	34	Partial excision of nail.....	1
Full thickness graft.....	9	Excision of skin and subcutaneous tissue with graft.....	1
Plastic closure of wound by interpolated flap.....	5		256
Bone graft, other than fracture..	4	BREAST	
Composite graft.....	3	Local excision of lesion of breast	61
Revision of pedicle.....	3	Local excision of cyst of breast..	40
Plastic closure of wound by rotation flap.....	1	Radical mastectomy.....	31
Plastic closure of wound with advanced flap.....	1	Complete (simple) mastectomy..	12
Revision of flap.....	1	Local excision of fibroadenoma..	9
Cartilage graft.....	1	Biopsy of breast.....	7
Fascial graft.....	1	Excision of gynecomastia.....	7
Dermatfat graft.....	1	Reduction of mastoplasty.....	4
	127	Breast constriction.....	2
		Mastotomy.....	1
		Mastotomy with drainage.....	1
		Augmentation mastoplasty.....	1
SKIN, SUBCUTANEOUS TISSUE			176
Local excision of benign neoplasm of skin.....	33	BONES, JOINTS, BURSAS	
Local excision of lesion of skin..	31	Closed reduction of fracture with internal fixation.....	90
Incision and drainage of subcutaneous abscess.....	28	Closed reduction of fracture....	19
Debridement of lesion of skin...	24	Closed reduction of fracture with cast.....	13
Local excision of lipoma.....	21	Open reduction of fracture with internal fixation.....	12
Local excision of lesion of subcutaneous tissue.....	13	Arthroplasty with mechanical device.....	9
Marsupialization of pilonidal sinus.....	12	Biopsy of bone or bone lesion...	7
Wide excision of malignant neoplasm of skin.....	11	Removal of foreign body in bone	6
Wide excision of lesion of skin..	8	Local excision of lesion of bone.	4
Repair of skin without graft....	7	Closed reduction of fracture with skeletal traction.....	4
Local excision of scar.....	7	Excision of bursa.....	4
Biopsy of skin or subcutaneous tissue.....	7	Partial osteotomy.....	3
Insertion of prosthesis into subcutaneous tissue.....	7	Complete osteotomy.....	3
Tattoo of lesion of skin.....	7	Osteotomy.....	3
Rhytidectomy.....	6	Osteoplasty.....	3
Incision and drainage of wound infection.....	4	Arthrotomy with removal of foreign body.....	2
Secondary suture of wound of skin or subcutaneous tissue...	4	Drainage of bone.....	2
Removal of prosthesis from subcutaneous tissue.....	4	Local excision of lesion of joint..	2
Dermabrasion.....	4	Artherectomy.....	2
Excision of scar.....	3	Closed reduction of dislocation with cast, splint or traction...	2
Wide excision of lesion of subcutaneous tissue.....	3	Fusion of bone (other than spinal fusion).....	1
Primary suture of wound of skin or subcutaneous tissue.....	3	Removal of sequestrum (other than skull).....	1
Evacuation of hematoma of subcutaneous tissue.....	2	Debridement for compound fracture.....	1
Excision of pilonidal sinus.....	2	Open reduction of fracture with cast.....	1

CLASSIFICATION OF OPERATIONS (PAVILION)—Continued

Cutting or division of ligaments.	1	LARYNX, TRACHEA, BRONCHI	
Excision of ligament.....	1	Local excision of lesion of larynx	2
Synovectomy.....	1	Laryngoscopy under general	
Suture of joint capsule.....	1	anesthesia.....	2
Open reduction of dislocation		Complete laryngectomy.....	1
with fixation or repair.....	1	Tracheostomy.....	24
	199	Tracheostomy: fistulization of	
MUSCLES, TENDONS, FASCIA		trachea.....	22
Biopsy of skin and muscle.....	64	Closure of tracheo-esophageal	
Removal of foreign body in		fistula.....	3
muscle.....	1	Hemimandibulectomy, simple...	1
Local excision of lesion of muscle	1	Hemimandibulectomy, supradi-	
Ganglionectomy.....	13	gastric neck resection, trache-	
Suture of tendon.....	3	ostomy.....	1
Transposition of tendon.....	2	Bronchoscopy under general	
Incision and drainage of tendon		anesthesia.....	1
sheath.....	1		57
Excision of lesion of tendon sheath	1		
Tenoplasty.....	1	LUNGS, PLEURA, MEDISTINUM	
Exploration of tendon.....	1	Complete (total) pneumonectomy	11
Fasciectomy.....	2	Thoracotomy with exploration..	9
	90	Local excision of lesion of lung	
EXTREMITIES		(by pneumonotomy).....	6
Amputation of leg.....	23	Complete lobectomy.....	6
Amputation of toe(s).....	11	Biopsy of lung.....	6
Incision and drainage of infection		Thoracoplasty.....	2
of foot.....	3	Thoracotomy with open drainage	2
Amputation of finger(s).....	3	Thoracotomy with closed	
Amputation of foot.....	2	drainage.....	1
Incision and drainage of infection		Thoracentesis.....	1
of finger(s).....	1	Pneumonotomy with open drain-	
Incision and drainage of infection		age.....	1
of hand.....	1	Mediastinotomy with excision of	
	44	lesion.....	3
Nose, Nasopharynx		Mediastinotomy with exploration	1
Excision of lesion of nose.....	30		49
Rhinoplasty.....	23	HEART, PERICARDIUM	
Septectomy, submucous resection	22	Mitral valvulotomy, closed.....	15
Reduction of fracture of nose...	11	Mitral valvulotomy, open.....	10
Correction of choanal atresia....	1	Aortic valvulotomy.....	8
Biopsy of nose.....	1	Closure of ventricular septal defect	8
Rhinotomy with removal of for-		Angiocardiography.....	7
eign body.....	1	Closure of atrial septal defect...	7
Turbineotomy.....	1	Mitral valvuloplasty.....	5
	90	Aortic valvuloplasty.....	3
ACCESSORY SINUSES		Cardiotomy with exploration...	2
Radical sinusotomy.....	5	Excision of pulmonary infundi-	
Puncture of sinus for aspiration		bular stenosis.....	2
or irrigation.....	1	Insertion of cardiac pacemaker..	2
Local excision of lesion of larynx	1	Cardiotomy with exploration...	1
Incision of lesion of accessory		Pulmonary valvulotomy.....	1
sinus.....	1	Correction of tetralogy of Fallot	1
Radical excision of accessory sinus	1	Defibrillation—external.....	12
Ethmoidectomy.....	1	Cardiac massage.....	1
	10	Pericardiotomy with exploration	4
			89

CLASSIFICATION OF OPERATIONS (PAVILION)—Continued

ARTERIES, VEINS

Cerebral angiography.....	57
Arteriotomy with bypass graft..	10
Arteriotomy with exploration...	7
Endarterectomy.....	6
Aneurysmorrhaphy, intracranial	5
Venous anastomosis.....	4
Ligation of patent ductus arteriosus	4
Suture of artery.....	3
Transection of patent ductus arteriosus.....	3
Arterial embolectomy.....	2
Exploration of artery without incision.....	1
Arteriotomy with insertion of catheter (for chemotherapy infusion).....	1
Exploration of arterial graft....	1
Excision of lesion of artery.....	1
Excision of artery with graft...	1
Excision of arterial aneurysm...	1
Arterial thrombectomy.....	1
Suture of arteriovenous fistula..	1
Ligation of artery, cervical.....	1
Removal of clamp from carotid artery.....	1
Aortic anastomosis.....	9
Excision of coarctation of aorta.	5
Excision of aortic aneurysm with graft.....	4
Aortotomy with bypass graft...	2
Excision of coarctation of aorta with graft.....	1
Aortic embolectomy.....	1
Aortic thrombectomy.....	1
Aortography.....	1
Operation for varicose veins; phlebectomy.....	40
Catheterization of vein.....	4
Venous anastomosis.....	3
Portacaval shunt.....	3
Venography, dural sinus.....	2
Ligation of vein.....	2
Splenorenal shunt.....	1
	190

SPLEEN, LYMPHATIC SYSTEM

Splenectomy.....	11
Biopsy of lymph nodes.....	69
Local (simple) excision of lymph nodes.....	53
Lymphadenectomy.....	22
Radical neck dissection.....	6
Radical excision of lymph nodes	4
Radical lymphadenectomy.....	2
Excision of lesion of lymphatic channel.....	1
Gastroscopy under general anesthesia.....	1
Incision and drainage of lymph nodes.....	2
	171

ORAL CAVITY, SALIVARY GLANDS

Plastic repair of cleft lip.....	12
Local excision of lesion of lip...	5
Excision of lesion of mouth.....	3
Removal of radioactive substance from mouth.....	3
Biopsy of tongue.....	3
Wide excision of malignant neoplasm of lip.....	2
Implantation of radioactive substance in mouth.....	2
Partial glossectomy.....	2
Removal of prosthesis, mouth...	1
Incision and drainage of abscess of mouth.....	1
Wide excision of malignant neoplasm of mouth.....	1
Biopsy of mouth.....	1
Cheiloplasty (other than for cleft lip).....	1
Repair of rhino-oral fistula....	1
Simple extraction of tooth.....	54
Incision and drainage of alveolar abscess.....	12
Surgical removal of tooth.....	4
Local excision of dental ridges..	2
Dental root resection; apicectomy	1
Biopsy of gum.....	1
Suture of gum.....	1
Palatal pushback.....	4
Local excision of lesion of palate	2
Primary repair of cleft palate...	2
Palatal pushback and pharyngeal flap construction.....	2
Implant of radium needle at base of tongue.....	2
Wide excision of malignant neoplasm of palate.....	1
Biopsy of palate.....	1
Suture of palate.....	1
Closure of fistula of palate.....	1
Excision of lesion of salivary gland	9
Incision and drainage of salivary gland.....	1
Excision of salivary gland.....	1
Biopsy of salivary gland.....	1
	141

PHARYNX, ADENOIDS, TONSILS

Tonsillectomy and adenoidectomy	182
Tonsillectomy alone.....	163
Adenoidectomy alone.....	21
Excision of pharyngo-esophageal diverticulum.....	2
Local excision of lesion of pharynx	2
Removal of foreign body from hypopharynx.....	1
	371

CLASSIFICATION OF OPERATIONS (PAVILION)—Continued

ESOPHAGUS

Esophagoscopy under general anesthesia.....	6
Esophagomyotomy.....	3
Esophagoscopy with removal of foreign body.....	3
Esophagoscopy with dilation....	3
Removal of foreign body from esophagus.....	2
Esophagogastrectomy.....	2
Biopsy of esophagus.....	1
Esophagogastrostomy.....	1
Esophagostomy—cervical.....	1

22

STOMACH

Partial (subtotal) gastrectomy..	56
Gastroenterostomy.....	19
Gastrostomy.....	14
Pyloromyotomy.....	9
Gastrotomy with exploration...	3
Pyloroplasty.....	1
Suture of stomach.....	1
Closure or taking down of gastroenterostomy.....	1
Closure of gastrostomy.....	1

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SMALL BOWEL

Resection of small bowel.....	16
Lysis of small bowel adhesions..	10
Enteroenterostomy, small bowel to small bowel.....	5
Enteroenterostomy, small bowel to large bowel.....	4
Revision of enterostomy, small bowel.....	3
Plication of perforated duodenal ulcer.....	2
Enterostomy, small bowel.....	2
Biopsy of small bowel.....	1
Reduction of small bowel volvulus.....	1
Reduction of small bowel intussusception.....	1
Suture of small bowel.....	1

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LARGE BOWEL

Left (descending) colectomy....	25
Colostomy.....	20
Local excision of large bowel lesion not requiring anastomosis	13
Closure of colostomy.....	12
Right (ascending) colectomy....	9
Revision of colostomy.....	7
Partial (subtotal) colectomy....	6
Transverse colectomy.....	6
Sigmoidotomy.....	4
Complete (total) colectomy....	3
Sigmoidectomy.....	2

Colotomy.....	2
Reduction of large bowel intussusception.....	2
Exteriorization of large bowel...	2
Cecostomy.....	2
Suture of large bowel.....	2
Application of crushing clamp to large bowel.....	1
Biopsy of large bowel.....	1
Sigmoidostomy.....	1
Closure of cecostomy.....	1

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APPENDIX

Appendectomy for acute appendicitis.....	70
Appendectomy with drainage for acute appendicitis.....	8
Appendectomy for chronic appendicitis.....	6
Incision and drainage of appendiceal abscess.....	4

88

RECTUM, ANUS

Proctoscopy with excision.....	20
Abdominoperineal resection of rectum and sigmoid.....	7
Incision and drainage of perirectal abscess.....	7
Abdominoperineal resection of rectum.....	4
Proctoscopy with biopsy.....	4
Local excision of lesion of rectum	3
Proctoscopy with dilation.....	2
Closure of rectourethral fistula..	1
Partial (subtotal) resection of rectum.....	1
Abdominoperineal resection of rectum with pull-through....	1
Proctoscopy.....	1
Proctoscopy with removal of foreign body.....	1
Hemorrhoidectomy.....	18
Anal fistulotomy.....	3
Anoplasty.....	3
Anal fistulectomy.....	2
Local excision of anus.....	1
Anal sphincteroplasty.....	1
Suture of anus.....	1
Dilation of anal sphincter.....	1

82

LIVER, BILIARY TRACT, PANCREAS

Biopsy of liver.....	18
Cholecystectomy for chronic disease.....	87
Cholecystectomy for acute or chronic disease and choledochotomy.....	39

CLASSIFICATION OF OPERATIONS (PAVILION)—Continued

Cholecystectomy for acute disease.....	29	Incision and drainage of perirenal abscess.....	1
Cholecystostomy.....	12		74
Choledochotomy with exploration	11	URETER	
Choledocholithotomy.....	8	Construction of ileal conduit....	13
Cholecystojejunostomy.....	6	Reimplantation of ureter into bladder.....	12
Cholecystotomy with removal of calculus.....	4	Cutaneous ureterostomy.....	6
Excision of cystic duct remnant.	1	Ureterolithotomy.....	5
Plastic repair of bile duct.....	1	Ureterolysis.....	2
Choledochoplasty.....	1	Ureteroplasty.....	1
Pancreatoduodenectomy, radical, for malignant neoplasm.....	2		39
Pancreatoduodenectomy.....	1	BLADDER, URETHRA	
Biopsy of pancreas.....	1	Transurethral resection of bladder	67
	221	Cystotomy.....	16
ABDOMEN, PERITONEUM, OMENTUM		Complete (total) cystectomy....	5
Exploratory laparotomy.....	40	Partial cystectomy.....	5
Biopsy of abdominal wall.....	11	Cystoplasty.....	5
Incision and drainage of intra-abdominal abscess.....	8	Cystoscopy.....	3
Secondary suture of abdominal wall.....	6	Litholapaxy.....	3
Lysis of peritoneal adhesions....	6	Closure of exstrophy of bladder.	2
Debridement of abdominal wall.	3	Closure of fistula of bladder....	1
Incision and removal of foreign body in the abdominal wall....	2	Cystolithotomy.....	1
Excision of lesion of abdominal wall.....	2	Local excision of lesion of bladder	1
Reopening of recent laparotomy incision for removal of hematoma.....	1	Exploration of perivesical tissues and/or space.....	1
Primary suture of abdominal wall	1	Cystoplasty with intestinal graft	1
Incision and drainage of peritoneal abscess.....	2	Meatotomy.....	16
Excision of retroperitoneal tumor	2	Urethroplasty.....	15
Incision and removal of foreign body in peritoneum.....	1	Excision of lesion of urethra....	7
Inguinal hernia repair.....	206	Closure of fistula of urethra....	6
Umbilical hernia repair.....	35	Urethral dilation.....	2
Ventral hernia repair.....	33	Fulguration of urethra.....	1
Femoral hernia repair.....	7		158
Esophageal hiatal hernia repair.	6	MALE GENITAL SYSTEM	
Epigastric hernia repair.....	6	Circumcision.....	54
Diaphragmatic hernia repair....	3	Excision of lesion of testicle....	28
Repair of omphalocele.....	2	Orchiopexy.....	27
	383	Scrotal orchiectomy.....	23
KIDNEY, RENAL PELVIS		Ligation of vas.....	22
Nephrectomy.....	24	Inguinal orchiectomy.....	7
Nephrostomy.....	12	Plastic operation on penis.....	6
Pyelolithotomy.....	10	Amputation of penis.....	4
Decapsulation of renal cyst....	5	Irrigation of corpora cavernosa, penis.....	4
Biopsy of kidney.....	5	Local excision of lesion of scrotum	3
Pyeloplasty.....	5	Biopsy of testis.....	2
Radical nephrectomy.....	4	Suture of testis.....	1
Nephro-ureterectomy.....	3	Excision of lesion of epididymis.	1
Exploration of perirenal tissues.	3	Excision of spermatic cord.....	1
Complete nephrolithotomy.....	2	Transurethral electroresection of prostate.....	81
		Retropubic prostatectomy, simple	21
		Perineal prostatectomy, radical.	6
		Suprapubic prostatectomy.....	5
		Perineal prostatectomy, simple..	3
			299

CLASSIFICATION OF OPERATIONS (PAVILION)—Continued

FEMALE GENITAL SYSTEM

Local excision of lesion of ovary.	4
Oophoroplasty.....	4
Salpingectomy.....	1
Control of bleeding from ovary.	1
Panysterectomy.....	1
Dilatation and curettage of uterus	1
	12

ENDOCRINE SYSTEM

Partial thyroidectomy for nontoxic condition.....	44
Partial thyroidectomy for toxic condition.....	11
Complete (total) thyroidectomy	1
Excision of thyroglossal duct cyst	1
Excision of tumor of parathyroid gland.....	1
Excision of thyroglossal duct cyst	1
Complete (total) hypophysectomy	21
Excision of pituitary adenoma..	3
Thymectomy.....	2
Adrenalectomy.....	2
Excision of tumor of adrenal gland	2
	89

SKULL, BRAIN, MENINGES

Craniectomy for craniostynosis	2
Removal of sequestrum.....	1
Removal of infected bone plate.	1
Orbital decompression, intracranial approach.....	1
Suboccipital decompression....	1
Excision of skull tumor.....	1
Cranioplasty.....	1
Pneumoencephalography.....	95
Ventriculography.....	39
Removal of biopsy of brain tumor	30
Exploration of brain for unverified tumor.....	6
Removal of foreign body in brain	4
Ventriculocervical anastomosis..	4
Evacuation of hematoma of brain	2
Ventriculopleural anastomosis...	2
Ventriculoperitoneal anastomosis	2
Revision of ventricular shunt...	2
Thalamotomy.....	2
Dye test for hydrocephalus....	2
Exploration of brain for other than tumor.....	1
Local excision of lesion of brain.	1
Ventriculocisternostomy.....	1
Ventriculovenous anastomosis...	1
Pallidotomy.....	1
Exploration of meninges, negative findings.....	11
Drainage of subdural hematoma.	9
Excision and/or repair of meningomyelocele.....	2
Drainage of epidural hematoma.	1

Closure of cerebrospinal fluid fistula.....	1
Excision of presacral cyst.....	1
	228

SPINAL CORD, NERVE ROOTS

Myelography.....	35
Decompression of cervical nerve root.....	5
Excision of herniated nucleus pulposus, lumbar.....	5
Excision of intraspinal tumor...	4
Chordotomy.....	3
Decompression of spinal cord...	2
Biopsy of intraspinal tumor....	1
Rhizotomy.....	1
Excision of lesion of spinal cord, other than cyst or tumor....	1
Biopsy of paraspinal tumor outside of vertebral canal....	1
Injection of alcohol, intrathecal.	1
Subarachnoid-ureteral anastomosis.....	1
Subarachnoid-peritoneal anastomosis.....	1
Revision of subarachnoid shunt.	1
	62

NERVES

Sympathectomy for other than hypertension.....	22
Excision of lesion of nerve.....	2
Phrenicotomy.....	2
Neurolysis.....	2
Biopsy of nerve.....	1
Neurotomy other than retrogasarian, acoustic, vagus and phrenic.....	1
Suture of nerve, recent injury...	1
	31

EAR

Stapedectomy with tissue graft and introduction of prosthesis.	22
Stage reconstructive otoplasty..	8
Otoplasty, unilateral or bilateral	7
Myringoplasty.....	6
Intubation of middle ear.....	4
Otoplasty for partial ear.....	3
Myringotomy.....	3
Mastoidectomy.....	3
Local excision of lesion of external ear.....	2
Mobilization of stapes.....	2
Modified radical mastoidectomy.	2
Ear construction.....	1
Radical mastoidectomy.....	1
Simple mastoidectomy.....	1
	65

CLASSIFICATION OF OPERATIONS (PAVILION)—Continued

EYE			
Enucleation of eyeball.....	12	Blepharoplasty.....	18
Keratoplasty.....	5	Biopsy of orbit.....	1
Kerotomy.....	1	Blepharotomy (angular	
Muscle surgery—ocular.....	75	venogram).....	1
Repair of retina.....	57	Excision of lesion of conjunctiva.....	15
Sclerotomy with drainage, or		Conjunctival flap.....	2
sclerostomy.....	24	Conjunctivoplasty.....	1
Sclerectomy by trephining.....	6	Suture of conjunctiva.....	1
Sclerotomy with exploration....	1	Dacryocystorhinostomy.....	7
Peripheral iridectomy.....	16	Excision of lacrimal gland.....	1
Cyclodialysis.....	8	Excision of lesion of eyelids....	9
Iridotomy.....	2	Ptosis surgery.....	3
Repair of prolapsed iris.....	2	Tarsorrhaphy.....	1
Excision of iris cyst.....	2	Canthoplasty.....	1
Suture of cornea with repair of		Goniotomy.....	4
iris prolapse.....	1	Discission of secondary	
Iris transfixion.....	1	membrane.....	3
Intracapsular lens extraction....	160	Examination under anesthesia..	2
Extracapsular lens extraction...	17		463
Capsulectomy.....	5		
Capsulotomy.....	1	TOTAL PAVILION OPERATIONS...	4,648

CLASSIFICATION OF OPERATIONS (PRIVATE)

Department of Surgery

Flaps, Grafts

Split thickness graft.....	60
Cutting or preparation of pedicle or tube.....	26
Bone graft (other than for fracture).....	9
Composite graft.....	7
Plastic closure of wound by rotation flap.....	6
Plastic reconstruction with excision of skin.....	6
Plastic closure of wound with advanced flap.....	6
Cartilage graft.....	5
Revision of pedicle.....	5
Full thickness graft.....	3
Plastic closure of wound by interpolated flap.....	3
Revision of flap.....	2
Dermafat graft.....	2
Fascial graft.....	1
Excision of retroperitoneal tumor	1

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SKIN, SUBCUTANEOUS TISSUE

Local excision of lesion of skin..	85
Local excision of lipoma.....	50
Local excision of benign neoplasm of skin.....	49
Rhytidectomy.....	46
Tattoo of lesion of skin.....	32
Local excision of lesion of subcutaneous tissue.....	29
Excision of scar.....	28
Wide excision of malignant neoplasm of skin.....	28
Incision and drainage of subcutaneous abscess.....	26
Local excision of scar.....	24
Debridement of lesion of skin...	18
Excision of pilonidal sinus.....	16
Derabrasion.....	14
Biopsy of skin or subcutaneous tissue.....	12
Wide excision of lesion of skin..	11
Primary suture of wound of skin and/or subcutaneous tissue...	9
Local excision of steatoma.....	8
Partial excision of nail.....	6
Secondary suture of wound of skin and/or subcutaneous tissues..	5
Wide excision of malignant neoplasm of subcutaneous tissue.	4
Marsupialization of pilonidal sinus.....	4
Evacuation of hematoma or seroma or subcutaneous tissue..	3

Removal of prosthesis from subcutaneous tissue.....	3
Complete excision of nail.....	3
Incision and drainage of wound infection.....	3
Incision and drainage of carbuncle	2
Incision and drainage of infected nail bed or fold.....	2
Wide excision of lesion of subcutaneous tissue.....	2
Excision of skin and subcutaneous tissue with graft.....	1
Incision and drainage of furuncle	1
Removal of sutures of skin....	1
Complete excision of toenails...	1

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BREAST

Local excision of cyst of breast.	92
Radical mastectomy.....	64
Local excision of lesion of breast	46
Biopsy of breast.....	24
Local excision of fibroadenoma..	18
Complete (simple) mastectomy..	16
Augmentation mastoplasty....	12
Excision of gynecomastia.....	6
Mastotomy.....	4
Reduction of mastoplasty.....	3
Local excision of aberrant breast tissue.....	1
Partial mastectomy.....	1

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BONES, JOINTS, BURSA

Closed reduction of fracture, with internal fixation.....	40
Debridement for compound fracture.....	12
Closed reduction of fracture, with cast.....	11
Local excision of lesion of bone.	11
Partial ostectomy.....	10
Removal of foreign body in bone	8
Open reduction of fracture with internal fixation.....	8
Complete ostectomy.....	5
Biopsy of bone.....	5
Biopsy of lesion of bone.....	4
Closed reduction of fracture...	4
Operation for nonunion of fracture	4
Ostectomy.....	3
Closed reduction of fracture, with skeletal traction.....	3
Complete ostectomy.....	3
Operation for malunion of fracture	3
Open reduction of fracture with fixation or repair.....	2

CLASSIFICATION OF OPERATIONS (PRIVATE)—Continued

Removal of sequestrum (other than skull).....	2	EXTREMITIES	
Exploration of bone.....	2	Amputation of leg.....	15
Drainage of bone.....	2	Amputation of toes.....	6
Excision of ulnar fragment....	2	Repair of syndactylia.....	4
Spinal fusion.....	2	Incision and drainage of infection of toe.....	3
Fusion of bone (other than spinal fusion).....	1	Amputation of fingers.....	3
Saucerization of bone.....	1	Incision and drainage of infection of foot.....	2
Application of Crutchfield tongs	1	Pollicization of finger.....	1
Excision of semilunar cartilage of knee joint.....	6	Amputation of toe by disarticulation.....	1
Closed reduction of dislocation with cast or traction.....	6		35
Arthroplasty.....	5	NOSE, NASOPHARYNX	
Local excision of lesion of joint..	4	Rhinoplasty.....	84
Arthroplasty with mechanical device.....	4	Septectomy; submucous resection	49
Arthrodesis.....	3	Excision of lesion of nose.....	36
Synovectomy.....	3	Biopsy of nose.....	3
Arthrotomy with exploration....	2	Biopsy of nasopharynx.....	3
Osteoplasty.....	1	Resection of nose.....	3
Arthrotomy with removal of foreign body.....	1	Reduction of fracture of nose...	2
Open reduction of dislocation with fixation or repair.....	1	Turbinectomy.....	1
Manipulation of joints.....	1		181
Arthrectomy.....	1	ACCESSORY SINUSES	
Suture of joint capsule.....	1	Radical sinusotomy.....	6
Cutting of division of ligaments.	1	Ethmoidectomy.....	6
Incision and removal of calcareous deposit in bursa.....	1	Incision of lesion of accessory sinus.....	1
Excision of bursa.....	1	Sphenoid sinusotomy, intranasal	1
Suture of ligament.....	1		14
	192	LARYNX, TRACHEA, BRONCHI	
MUSCLES, TENDONS, FASCIA		Laryngoscopy under general anesthesia.....	10
Biopsy of skin and muscle.....	29	Local excision of lesion of larynx	6
Local excision of lesion of muscle	3	Complete laryngectomy.....	2
Exploration of muscle.....	3	Partial laryngectomy.....	1
Resection of muscle.....	2	Laryngopharyngectomy.....	1
Excision and drainage of abscess of muscle.....	1	Tracheostomy: fistulization of trachea.....	14
Radical neck dissection.....	1	Tracheotomy.....	9
Myoplasty.....	1	Closure of tracheo-esophageal fistula.....	1
Tenotomy.....	1	Bronchoscopy under general anesthesia.....	1
Ganglionectomy (tendon or tendon sheath).....	25	Biopsy of bronchus.....	1
Suture of tendon.....	20		46
Excision of lesion of tendon or tendon sheath.....	10	LUNGS, PLEURA, MEDIASTINUM	
Tenoplasty.....	5	Thoracotomy with exploration..	11
Transposition of tendon.....	4	Thoracotomy with open drainage	3
Tenosynovectomy.....	2	Thoracotomy with closed drainage.....	2
Exploration of tendon.....	1	Biopsy of lung.....	1
Fasciectomy.....	8	Thoracoplasty.....	1
Removal of foreign body in fascia	2	Complete lobectomy.....	24
Fasciotomy.....	1	Complete (total) pneumonectomy	15
Aponeurotomy.....	1		
	120		

CLASSIFICATION OF OPERATIONS (PRIVATE)—*Continued*

Local excision of lesion of lung (by pneumonotomy).....	6	Exploration of aortic graft with excision and graft.....	3
Pleurectomy.....	4	Aortography.....	2
Biopsy of pleura.....	2	Excision of coarctation of aorta..	2
Partial lobectomy.....	1	Aortic anastomosis.....	1
Mediastinotomy with excision of lesion.....	6	Excision of coarctation of aorta with graft.....	1
Mediastinotomy with biopsy....	1	Operation of varicose veins; phlebotomy.....	113
	77	Venous anastomosis.....	7
HEART, PERICARDIUM		Portacaval shunt.....	5
Mitral valvulotomy, closed.....	20	Catheterization of vein.....	2
Closure of atrial septal defect...	5	Venography, dural sinus.....	2
Mitral valvulotomy, open.....	2	Ligation of vein.....	1
Pulmonary valvulotomy.....	2	Excision of venous aneurysm....	1
Correction of tetralogy of Fallot.	2		331
Aortic valvulotomy.....	1	SPLEEN, LYMPHATIC SYSTEM	
Angiocardiogram.....	1	Splenectomy.....	10
Mitral valvuloplasty.....	1	Biopsy of bone marrow.....	5
Cardiotomy with exploration...	1	Splenography.....	1
Pulmonary valvuloplasty.....	1	Biopsy of lymph node.....	74
Cardiac massage.....	2	Local (simple) excision of lymph nodes.....	31
Pericardiectomy with exploration	1	Lymphadenectomy.....	20
Pericardiotomy with exploration	1	Radical neck dissection.....	8
Pericardiotomy with drainage...	1	Radical excision of lymph nodes.	5
	41	Radical lymphadenectomy.....	5
ARTERIES, AORTA, VEINS		Excision of cystic hygroma.....	2
Cerebral angiography.....	99	Incision and drainage of lymph node.....	1
Arteriotomy with bypass graft..	9		162
Endarterectomy.....	9	ORAL CAVITY, SALIVARY GLANDS	
Transection of patent ductus arteriosus.....	6	Plastic repair of cleft lip.....	20
Aneurysmorrhaphy, intracranial.	5	Excision of lesion of mouth.....	8
Excision of arterial aneurysm graft.....	5	Incision and drainage of alveolar abscess.....	7
Exploration of artery without incision.....	3	Cheiloplasty (other than for cleft lip).....	6
Arterial embolectomy.....	3	Stomatoplasty.....	4
Arteriotomy with exploration...	3	Local excision of lesion of lip...	4
Biopsy of artery.....	3	Partial glossectomy.....	2
Ligation of patent ductus arteriosus.....	3	Biopsy of tongue.....	1
Excision of artery with graft....	2	Wide incision of malignant neo- plasm of lip.....	1
Excision of arteriovenous fistula.	2	Incision and drainage of abscess of mouth.....	1
Excision of arterial aneurysm...	2	Wide excision of malignant neo- plasm of mouth.....	1
Exploration of arterial graft....	2	Biopsy of mouth or lip.....	1
Suture of artery.....	1	Repair of rhino-oral fistula....	1
Ligation of artery.....	1	Plastic repair of mouth, with skin graft.....	1
Ligation of artery, cervical.....	1	Dental root resection, apicectomy	1
Excision of lesion of artery.....	1	Closure of external fistula of mouth.....	1
Arteriotomy with insertion of catheter (for chemotherapy infusion).....	6	Simple extraction of tooth.....	22
Repair of arteriovenous fistula..	1	Surgical removal of tooth.....	9
Arterial anastomosis.....	1	Palatal pushback.....	6
Excision of aortic aneurysm with graft.....	10	Primary repair of cleft palate...	3
Aortotomy with bypass graft...	9		
Aortic thrombectomy.....	4		

CLASSIFICATION OF OPERATIONS (PRIVATE)—*Continued*

Palatal pushback and pharyngeal flap construction.....	3	SMALL BOWEL	
Incision and drainage of abscess of palate.....	3	Lysis of small bowel adhesions..	18
Suture of palate.....	2	Resection of small bowel.....	16
Pharyngeal flap construction...	2	Enteroenterostomy, small bowel to large bowel.....	6
Closure of fistula of palate.....	2	Plication of perforated duodenal ulcer.....	5
Local excision of lesion of palate.	1	Revision of enterostomy, small bowel.....	3
Removal of torus palatinus.....	1	Enteroenterostomy, small bowel to small bowel.....	2
Excision of lesion of salivary gland	12	Enterostomy, small bowel.....	2
Excision of salivary gland.....	4	Reduction of small bowel volvulus	1
Biopsy of salivary gland.....	2	Local excision of small bowel lesion not requiring anastomosis	1
Radical excision of salivary gland	2	Excision of Meckle's diverticulum	1
Sialolithotomy.....	1	Biopsy of mesentery.....	1
Exploration of salivary gland or duct.....	1	Local excision of mesenteric lesion	1
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PHARYNX, ADENOIDS, TONSILS			
Tonsillectomy and adenoidectomy	198		
Tonsillectomy alone.....	54	LARGE BOWEL	
Adenoidectomy.....	15	Left (descending) colectomy....	58
Local excision of lesion of pharynx	3	Right (ascending) colectomy....	27
Excision of pharyngo-esophageal diverticulum.....	2	Colostomy.....	20
Excision of lingual tonsil.....	2	Closure of colostomy.....	18
Biopsy.....	1	Local excision of large bowel lesion not requiring anastomosis	17
Excision of bronchial cleft cyst.	1	Partial (subtotal) colectomy....	14
	276	Colotomy.....	10
ESOPHAGUS		Sigmoidectomy.....	7
Esophagogastrectomy.....	4	Revision of colostomy.....	7
Esophagoscopy under general anesthesia.....	2	Transverse colectomy.....	6
Esophagotomy with exploration.	1	Sigmoidostomy.....	5
Esophagotomy with removal of foreign body.....	1	Revision of cecostomy.....	4
Esophagectomy.....	1	Multiple colotomies.....	3
Esophagogastroplasty.....	1	Complete (total) colectomy....	3
Esophagogastrostomy.....	1	Closure of fecal fistula of colon.	1
Esophagojejunostomy.....	1	Sigmoidotomy.....	1
Esophageal bypass with jejunal replacement.....	1	Lysis of large bowel adhesions..	1
	13	Enteroenterostomy, large bowel to large bowel.....	1
STOMACH		Reduction of large bowel intussusception.....	1
Partial (subtotal) gastrectomy..	79	Exteriorization of large bowel..	1
Gastroenterostomy.....	11	Cecostomy.....	1
Complete (total) gastrectomy..	9	Application of crushing clamp to large bowel.....	1
Gastrostomy.....	5	Biopsy of large bowel.....	1
Local excision of lesion of stomach (other than ulcer or benign neoplasm).....	4		208
Pyloromyotomy.....	3	APPENDIX	
Radical gastrectomy.....	3	Appendectomy for acute appendicitis.....	77
Gastrotomy with exploration...	3	Appendectomy for chronic appendicitis.....	11
Biopsy of stomach.....	2	Appendectomy with drainage, for acute appendicitis.....	9
Pyloroplasty.....	1	Incision and drainage of appendiceal abscess.....	2
Suture of stomach.....	1		
Closure or taking down of gastroenterostomy.....	1		
	122		

CLASSIFICATION OF OPERATIONS (PRIVATE)—Continued

Appendectomy with drainage, for chronic appendicitis.....	1	ABDOMEN, PERITONEUM, OMENTUM	
	100	Exploratory laparotomy.....	66
RECTUM, ANUS		Biopsy of abdominal wall.....	12
Hemorrhoidectomy.....	84	Incision and drainage of intra- abdominal abscess.....	11
Proctoscopy with excision.....	23	Secondary suture of abdominal wall.....	4
Incision and drainage of perirectal abscess.....	20	Excision of lesion of abdominal wall.....	2
Anal fistulectomy.....	19	Debridement of abdominal wall.....	2
Local excision of anus.....	11	Reopening of recent laparotomy incision for removal of hematoma.....	1
Anal fistulotomy.....	10	Reopening of recent laparotomy incision for control of bleeding.....	1
Abdominoperineal resection of rectum and sigmoid.....	8	Incision and removal of foreign body in abdominal wall.....	1
Abdominoperineal resection of rectum.....	6	Excision of retroperitoneal tumor.....	1
Proctoscopy with biopsy.....	6	Lysis of peritoneal adhesions....	5
Local excision of lesion of rectum.....	5	Inguinal hernia repair.....	402
Anoplasty.....	2	Ventral hernia repair.....	32
Proctoscopy with dilation.....	2	Femoral hernia repair.....	19
Incision and drainage of perineal abscess.....	1	Esophageal hiatal hernia repair.....	14
Proctoscopy.....	1	Umbilical hernia repair.....	8
Proctoscopy with removal of foreign body.....	1	Diaphragmatic hernia repair....	6
Proctoscopy with division.....	1	Epigastric hernia repair.....	4
Reduction of prolapse of rectum.....	1	Umbilectomy.....	2
Anal sphincteroplasty.....	1	Suture of omentum.....	2
Suture of anus.....	1	Biopsy of omentum.....	1
Dilation of anal sphincter.....	1		596
Biopsy of anus (other than anoscopy).....	1		
	205	KIDNEY, RENAL PELVIS	
LIVER, BILIARY TRACT, PANCREAS		Nephrectomy.....	26
Biopsy of liver.....	14	Pyelolithotomy.....	17
Cholecystectomy for chronic disease.....	162	Nephrostomy.....	16
Cholecystectomy for acute or chronic disease and choledoch- otomy.....	34	Decapsulation of renal cyst.....	11
Cholecystectomy for acute disease.....	29	Pyeloplasty.....	8
Choledochotomy with exploration.....	9	Partial nephrectomy.....	7
Choledocholithotomy.....	8	Nephrolithotomy.....	4
Cholecystojejunostomy.....	6	Nephroureterectomy.....	3
Cholecystotomy with removal of calculus.....	4	Exploration of perirenal tissues..	3
Incision of sphincter of Oddi....	4	Radical nephrectomy.....	2
Cholecystostomy.....	3	Biopsy of kidney.....	1
Anastomosis of bile duct.....	3	Complete nephrolithotomy.....	1
Choledochoplasty.....	2	Incision and drainage of perirenal abscess.....	1
Excision of cystic duct and/or gallbladder remnant.....	2	Pyelotomy with exploration....	1
Plastic reconstruction of bile duct.....	1		101
Cholecystoduodenostomy.....	1	URETER	
Cholecystotomy with exploration.....	1	Reimplantation of ureter into bladder.....	24
Operative cholangiography.....	1	Cutaneous ureterostomy.....	8
Radical pancreatoduodenectomy for malignant neoplasms.....	3	Ureterolithotomy.....	8
Choledochotomy with exploration.....	1	Construction of ileal conduit....	3
	288	Loop extraction of ureteral stone.....	1
			44

CLASSIFICATION OF OPERATIONS (PRIVATE)—Continued

BLADDER, URETHRA

Transurethral resection of bladder.....	93
Cystotomy.....	23
Cystopexy.....	13
Cystoplasty.....	13
Partial cystectomy.....	11
Cystolithotomy.....	10
Cystoscopy.....	9
Local excision of lesion of bladder, by cystotomy.....	7
Complete (total) cystectomy....	6
Cystoplasty with intestinal graft	3
Cystoscopy with biopsy.....	3
Exploration of perivesical tissues and/or space.....	3
Litholapaxy.....	2
Closure of fistula of bladder....	2
Closure of exstrophy of bladder.	1
Urethroplasty.....	16
Meatotomy.....	11
Suture of urethra.....	10
Excision of lesion of urethra....	3
Urethral dilatation.....	3
Fulguration of urethra.....	3

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MALE GENITAL SYSTEM

Circumcision.....	8
Plastic operation on penis.....	7
Local excision of lesion of penis..	3
Dorsal slit of penis.....	1
Incision of penis.....	1
Irrigation of corpora cavernosa, penis.....	1
Epididymectomy.....	4
Excision of lesion of epididymis.	1
Epididymotomy and drainage...	1
Biopsy of epididymis.....	1
Scrotal orchiectomy.....	22
Excision of lesion of testis.....	20
Orchiopexy.....	12
Biopsy of testis.....	6
Inguinal orchiectomy.....	6
Ligation of vas.....	3
Local excision of lesion of scrotum	2
Suture of testis.....	1
Suture of scrotum.....	1
Transurethral electroresection of prostate.....	135
Suprapubic prostatectomy.....	68
Retropubic prostatectomy, simple.....	20
Biopsy of prostate.....	7
Perineal prostatectomy, radical.	4
Combined prostatectomy.....	3
Perineal prostatectomy, simple..	3
Removal of pack from prostate fossa.....	1

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FEMALE GENITAL SYSTEM

Panhysterectomy.....	12
Oophoroplasty.....	7
Colpoplasty.....	7
Dilatation and curettage of uterus.....	5
Salpingo-oophorectomy.....	3
Supracervical hysterectomy....	2
Operation on vulva, for other than repair.....	2
Local excision of lesion of cervix.	2
Control of bleeding from ovary..	2
Local excision of lesion of vagina	1
Colopexy.....	1
Incision and drainage of ovary..	1
Trachelectomy.....	1
Oophorectomy.....	1
Hydrocelectomy.....	1
Local excision of lesion of ovary.	1

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ENDOCRINE SYSTEM

Partial thyroidectomy, for non-toxic condition.....	87
Complete (total) hypophysectomy	31
Partial thyroidectomy, for toxic condition.....	15
Excision of pituitary adenoma...	7
Excision of thyroglossal duct cyst	5
Excision of tumor of parathyroid gland.....	4
Thymectomy.....	3
Complete (total) thyroidectomy.	3
Excision of tumor of adrenal gland	2
Reopening of thyroid wound for control of hemorrhage.....	1
Adrenalectomy.....	1
Local excision of lesion of endocrine gland.....	1
Excision of lesion of aberrant thyroid.....	1

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SKULL, BRAIN, MENINGES

Excision of skull tumor.....	6
Orbital decompression, intra-cranial approach.....	2
Biopsy of skull tumor.....	1
Removal of infected bone plate..	1
Cranioplasty.....	1
Pneumoencephalography.....	82
Removal or biopsy of brain tumor	53
Ventriculography.....	29
Revision of ventricular shunt...	6
Ventriculocervical anastomosis..	5
Ventriculopleural anastomosis...	4
Exploration of brain, for other than tumor.....	3
Insertion of tube into brain ventricle for drainage.....	3

CLASSIFICATION OF OPERATIONS (PRIVATE)—Continued

Ventriculoperitoneal anastomosis	2	EAR	
Evacuation of hematoma of brain	2	Stapedectomy with tissue graft and introduction of prosthesis	66
Removal of foreign body in brain	1	Mobilization of stapes	9
Puncture of brain for aspiration	1	Myringoplasty	8
Local excision of lesion of brain, for other than abscess, tumor or arteriovenous anomaly	1	Stage reconstructive otoplasty	7
Excision of brain abscess	1	Otoplasty for partial ear amputation	5
Exploration of meninges, negative findings	8	Myringotomy	5
Drainage of subdural hematoma	7	Bilateral otoplasty	5
Drainage of epidural hematoma	4	Local excision of lesion of external ear	5
Closure of cerebrospinal fluid fistula	3	Otoplasty, bilateral	2
Excision and/or repair of spinal meningocele	2	Intubation of middle ear	2
Excision of meningeal cyst	1	Ear construction	1
Excision and repair of encephalocele	1	Labyrinthotomy	1
Drainage of subarachnoid hematoma	1	Revision of fenestration	1
	231	Modified radical mastoidectomy	6
		Mastoidectomy	2
		Simple mastoidectomy	1
			126
SPINAL CORD, NERVE ROOTS		EYE	
Myelography	52	Enucleation of eyeball	16
Excision of herniated nucleus pulposus, lumbar	37	Keratoplasty	8
Chordotomy	10	Keratotomy	4
Excision of intraspinal tumor	5	Keratotomy with chelation	3
Exploration of spinal cord	5	Keratocentesis	1
Decompression of spinal cord tumor, irremovable	3	Sclerotomy with drainage; scleral fistula operation	49
Rhizotomy	3	Sclerectomy by trephining	17
Biopsy of paraspinal tumor	3	Sclerotomy	1
Decompression of cervical cord, spondylosis	3	Sclerotomy with removal of intraocular foreign body	1
Excision of lesion of spinal cord	2	Peripheral iridectomy	43
Decompression laminectomy	2	Cyclodialysis	11
Chordotomy and rhizotomy	2	Complete iridectomy	3
Decompression of cervical nerve root	2	Suture of cornea with repair of iris prolapse	2
Injection of alcohol	1	Optical iridectomy	1
Biopsy of intraspinal tumor	1	Coreoplasty	1
Decompression of cervical cord	1	Repair of prolapsed iris	1
	132	Intracapsular lens extraction	213
		Extracapsular lens extraction	17
NERVES		Capsulectomy	3
Sympathectomy for other than hypertension	13	Capsulotomy	2
Excision of lesion of nerve	10	Repair of retina	145
Vagotomy	7	Ocular muscle surgery	145
Neurolysis	5	Blepharoplasty	33
Retrogasserian neurotomy	5	Orbitotomy	1
Anastomosis of nerve	5	Orbitotomy with removal of foreign body	1
Neurectomy	3	Blepharotomy	1
Neuroplasty	3	Exenteration of orbital contents	1
Neurotomy	2	Excision of lesion of conjunctiva	10
Suture of nerve	2	Biopsy of conjunctiva	1
Exploration of nerve	2	Suture of conjunctiva	1
Sympathectomy for hypertension	2	Dacryocystorhinostomy	4
	59	Excision of lacrimal sac	2
		Excision of lacrimal gland	1
		Nasolacrimal duct probing	1

CLASSIFICATION OF OPERATIONS (PRIVATE)—*Continued*

Excision of lesion of eyelids.....	11	Discission of secondary mem-	
Ptois surgery.....	10	brane.....	1
Incision and drainage of sub-		Repair of vitreous hernia.....	3
cutaneous cyst of eyelid.....	1	Tarsorrhaphy.....	3
Plastic operation on canaliculi..	1		
Goniotomy.....	2		776
		TOTAL PAVILION OPERATIONS....	6,421

CLASSIFICATION OF DEATHS

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TABLE I

TOTAL PAVILION DEATHS—1962			
Operative deaths.....	89	Autopsies.....	73 (including 9 Medical Examiner's cases)..... 68.9%
Nonoperative deaths.....	17	No autopsies.....	33 (including 7 Medical Examiner's cases)..... 31.1%
Total.....	106	Total.....	106
Cancer cases in which cancer caused death.....	18	Deaths following operative emergencies.....	10
Cancer cases with other causes of death.....	22	Deaths following nonoperative emergencies.....	0
Total Cancer Cases.....	40		10

OPERATIVE DEATHS, GENERAL SURGERY (PAVILION)

Number	Age	Primary Diagnosis	Operation	Cause of Death	Autopsy
DEATHS RELATED TO GASTROINTESTINAL DISEASES: 13					
(*Cancer Cases: 7		†Emergencies: 1	M.E.: Medical Examiner's Cases: 2)		
241186	58	Pseudomyxoma peritonei, small bowel and omentum	1. Biopsy of abdominal wall tumor †2. Debridement of abdominal wall	Toxemia due to gangrene of abdominal wall	Yes (M.E.)
901978	78	*Carcinoma of colon (hepatic flexure)	Right hemicolectomy, gastroenterostomy and gastrotomy	Cardiac failure	No
909557	57	*Carcinoma of stomach, carcinoma-tosis; hypertension	1. Exploratory laparotomy 2. Re-exploration of abdomen	1. Myocardial infarction 2. Congestive heart failure, pulmonary edema	No
882610	19	Chronic ulcerative colitis	1. Inferior vena cava ligation 2. Total colectomy with ileostomy	Hepatorenal failure; hemorrhagic diathesis	Yes (M.E.)

TABLE I: OPERATIVE DEATHS, GENERAL SURGERY (PAVILION)—Continued

<i>Number</i>	<i>Age</i>	<i>Primary Diagnosis</i>	<i>Operation</i>	<i>Cause of Death</i>	<i>Autopsy</i>
596764	51	Regional enteritis; massive gastro-intestinal hemorrhage; shortened small bowel	1. Resection of distal jejunum, cholecystostomy 2. Resection of proximal jejunum, duodenotransverse colostomy 3. Plication duodenocolic anastomosis, ligation bleeding small bowel mesentery	Monilia septicaemia	No
881403	77	*Carcinoma of sigmoid colon with metastases	Cervical node biopsy	Carcinomatosis	Yes
918118	72	*Carcinoma of the cecum with lymph node metastasis; hypertensive cardiovascular disease	Right hemicolectomy with ileotransverse colostomy, gastrotomy and jejunotomy	Coronary occlusion	Yes
776772	54	*Carcinomatosis secondary to gastric carcinoma; small bowel obstruction secondary to metastatic carcinoma	Exploratory laparotomy, small bowel resection	1. Carcinomatosis 2. Cerebrovascular accident	Yes
922955	72	Large bowel obstruction, secondary to diverticulitis of rectosigmoid	Transverse colostomy	1. Pneumonia 2. Pseudomembranous enterocolitis 3. Acute renal failure	Yes
918978	56	Gastric ulcer with perforation into liver	Subtotal gastrectomy and gastrojejunostomy	Renal failure and shock	Yes
52366	62	*Carcinoma of rectum	Abdominoperineal coloproctectomy	Metastatic carcinoma of the rectum	Yes
926078	15	Acute appendicitis with perforation; multiple abscesses and enterocutaneous fistulae	1. Plication of bleeding duodenal ulcer; gastrostomy; drainage of subhepatic abscess 2. Subtotal gastrectomy; gastrojejunostomy; drainage of multiple abdominal abscesses	1. Malnutrition 2. Coechixia 3. Multiple abdominal abscesses 4. Brain abscesses	Yes
925689	57	*Carcinoma rectosigmoid colon	1. Sigmoid resection 2. Drainage, intra-abdominal abscess and transverse colostomy 3. Tracheostomy	Peritonitis	Yes

DEATHS RELATED TO DISEASES OF BILIARY TRACT, LIVER, AND PANCREAS: 11

(*Cancer Cases: 6		†Emergencies: 1	M.E.: Medical Examiner's Case: 0)		
879103	56	*Carcinoma of pancreas with liver metastases	1. Exploratory laparotomy with liver biopsy 2. Closure of wound evisceration	Metastatic carcinoma	Yes
171944	59	Choledocholithiasis, partial cholecystectomy	1. Choledocholithotomy, partial cholecystectomy, duodenotomy 2. Exploratory laparotomy	Postoperative pancreatitis	Yes
508795	70	*Carcinoma, ampulla of Vater: chronic cholecystitis, cholelithiasis; cholecystectomy; acute renal failure	Cholecystectomy, choledochotomy; duodenotomy, excision of carcinoma of ampulla of Vater	Cardiac arrhythmia	Yes
824949	58	Laennec's cirrhosis with esophageal varices and G.I. bleeding	Tracheostomy	Hepatic decompensation	Yes
703555	73	*Carcinoma pancreas with obstructive jaundice; liver and pulmonary metastases	Exploratory laparotomy, common duct exploration, liver biopsy	Coronary occlusion	No
911389	60	Cirrhosis	1. Common duct exploration; cholangiogram; liver biopsy 2. Drainage of bile peritonitis; exploratory laparotomy	Bile peritonitis	Yes
848946	50	*Carcinoma of pancreas with carcinomatosis	Cholecystojejunostomy; liver biopsy	Carcinomatosis	Yes
892942	48	*Carcinoma of the pancreas with hepatic metastases and ascites	Exploratory laparotomy with hepatic biopsy	Abdominal carcinomatosis and hepatic coma	Yes
215414	67	*Carcinoma of pancreas with hepatic and peritoneal metastases	Exploratory laparotomy, liver biopsy	Carcinomatosis	No
854034	42	Cirrhosis of the liver with hepatosplenomegaly and G.I. bleeding from esophageal varices	1. Splenoportogram 2. Splenorenal shunt	Hepatic failure	No
499526	57	Laennec's cirrhosis with portal hypertension; bleeding esophageal varices	†Portacaval shunt	Recurrent bleeding from esophageal varices; uremia; hepatic failure	Yes

TABLE 1: OPERATIVE DEATHS, GENERAL SURGERY (PAVILION)—Continued

<i>Number</i>	<i>Age</i>	<i>Primary Diagnosis</i>	<i>Operation</i>	<i>Cause of Death</i>	<i>Autopsy</i>
DEATHS RELATED TO CARDIOVASCULAR AND VASCULAR DISEASES: 10					
(*Cancer Cases: 0 †Emergencies: 2 M.E.: Medical Examiner's Case: 1)					
925404	42	Dissecting aneurysm of the aorta	Repair of dissecting aneurysm of the aorta	Gastrointestinal hemorrhage	Yes
459676	58	Superior mesenteric artery thrombosis; inferior mesenteric artery occlusion	†Exploratory laparotomy, superior mesenteric thromboendarterectomy, resection of ileum and colon	Shock; infarction of jejunum and stomach	Yes
23477	40	Aortic stenosis—congenital	1. Open aortic valvulotomy with cardiopulmonary by-pass ‡2. Subtotal gastrectomy	Renal failure	No
98809	74	Arteriosclerotic peripheral vascular disease	1. Left lumbar sympathectomy 2. Left femoral-popliteal Teflon bypass graft 3. Left mid-thigh amputation	Coronary occlusion	Yes
906257	68	Arteriosclerotic aneurysm of abdominal aorta	Resection of abdominal aortic aneurysm	Renal failure	Yes
528591	36	Rheumatic heart disease with enlarged heart, mitral stenosis and insufficiency, tricuspid insufficiency	Closed mitral valvulotomy, open tricuspid valvulotomy with cardiopulmonary bypass	Mitral regurgitation with acute pulmonary edema	Yes
449041	53	Arteriosclerosis obliterans	1. Excision basal cell carcinoma, right scrotum 2. Wide excision of skin of scrotum 3. Exploratory laparotomy right iliac, femoral and popliteal exploration, bilateral sympathectomy 4. Exploratory laparotomy, bilateral femoral and popliteal exploration, thromboendarterectomy and iliocecostomy	Coronary occlusion	No

812759	45	Rheumatic heart disease with mitral insufficiency	Open heart valve replacement	Ventricular fibrillation	Yes (M.E.)
720086	32	Rheumatic heart disease with mitral stenosis, mitral insufficiency	Open cardiotomy with replacement of mitral valve with Starr prosthesis	Renal failure	Yes
819338	55	Ruptured abdominal aortic aneurysm	Cardiac massage	Ruptured abdominal aneurysm	Yes
DEATHS RELATED TO DISEASES OF ESOPHAGUS AND LUNGS: 4					
(*Cancer Cases: 4 †Emergencies: 0 M.E.: Medical Examiner's Case: 0)					
402565	68	*Carcinoma of lung with metastases	Open liver biopsy	Carcinomatosis; myocardial infarction	Yes
899040	72	*Bronchogenic carcinoma of right middle and lower lobes	1. Right middle and lower lobectomy 2. Thoracotomy, rib resection and drainage empyema	Bronchopleural fistula and empyema	Yes
916090	63	*Carcinoma of lung	Exploratory thoracotomy with cardiac massage	Coronary occlusion	Yes
697106	75	*Recurrent carcinoma of right lung	Biopsy of recurrent carcinoma in thoracotomy scar	Carcinomatosis	Yes
DEATHS RELATED TO MISCELLANEOUS CONDITIONS: 9					
(*Cancer Cases: 4 †Emergencies: 0 M.E.: Medical Examiner's Case: 1)					
832854	80	*Right pyelonephritis, carcinoma of prostate with pulmonary metastases	Cholecystostomy and cholangiogram	Renal failure; myocardial infarction; congestive heart disease	Yes
77127	74	*Recurrent carcinoma of rectum	Insertion bilateral hypogastric arterial plastic catheter for chemotherapeutic infusion	Recurrent renal carcinoma	Yes
896314	23	Extensive full-thickness burns, 40% of body surface	1-10. Debridement and skin grafts 11. Exploratory laparotomy for perforated duodenal ulcer 12. Subtotal gastric resection with gastrojejunostomy 13. Closure of abdominal wound dehiscence; jejunostomy	Septicemia; adrenal failure; peritonitis	No (M.E.)

TABLE I: OPERATIVE DEATHS, GENERAL SURGERY (PAVILION)—Continued

<i>Number</i>	<i>Age</i>	<i>Primary Diagnosis</i>	<i>Operation</i>	<i>Cause of Death</i>	<i>Autopsy</i>
889749	74	*Carcinoma of ampulla of Vater; arteriosclerotic cardiovascular disease	1. Radical pancreatic duodenectomy 2. Tracheotomy	Myocardial infarction; Staphylococcal pneumonia; pancreatic jejunal cutaneous fistula	No
847003	55	Diabetes mellitus with gangrene of right great toe	Right mid-thigh amputation	Congestive heart failure	Yes
917033	38	Spastic paraplegia secondary to spinal cord compression; neurogenic bladder secondary to (1); upper gastrointestinal bleeding secondary to stress gastric ulcers	1. Appendectomy and formation of ileal conduit 2. Exploratory laparotomy, gastrotomy, ligation of multiple bleeding gastric ulcers	Septicemia due to Gram negative organism	Yes
882483	28	*Carcinoma of cervix, stage II	1. Bilateral nephrostomies 2. Incision and drainage of pelvic abscess, resection ileum, cecostomy, gastrostomy 3. Operative reinsertion left nephrostomy tube 4. Gastrostomy	Bronchopneumonia	Yes
223836	66	Diabetes mellitus with gangrene of left foot	Left mid-thigh amputation	Myocardial infarction	Yes
639787	80	Left inguinal hernia with incarceration	Left inguinal hernia repair	Myocardial infarction	Yes

TABLE II

OPERATIVE DEATHS, SURGICAL SPECIALTIES (PAVILION)

<i>Number</i>	<i>Age</i>	<i>Primary Diagnosis</i>	<i>Operation</i>	<i>Cause of Death</i>	<i>Autopsy</i>
PEDIATRIC SURGERY: 9					
(*Cancer Cases: 0 †Emergencies: 1 M.E.: Medical Examiner's Case: 1)					
925996	10 days	Esophageal atresia	†Stamm gastrostomy	Meningitis; multiple anomalies	Yes
899987	9 weeks	Interventricular septal defect; congestive heart failure and pulmonary edema	1. Biplane angiocardiogram, left brachial artery 2. Median sternotomy	Cardiac arrest	Yes

901766	3 months	Single ventricle	Exploratory cardiotomy; insertion Teflon interventricular septum	Inability to re-establish heart beat after coming off cardio- pulmonary bypass	Yes
891998	4 months	Intestinal obstruction with localized perforations	Exploratory laparotomy; lysis of adhesions; resection gangrenous small bowel	Peritonitis; pneumonia	Yes
823751	11	Congenital heart disease; transposi- tion of aorta; aortic insufficiency; ventricular septal defect	Exploratory cardiotomy; prosthet- ic modification of left ventricular outflow tract	Heart failure	Yes (M.E.)
574110	12	Atrioventricular canal with pulmo- nary stenosis and bilateral superior vena cava	Intrapericardial aorticopulmonary shunt with teflon prosthesis	Tracheobronchitis; bronchopneumonia	Yes
915826	2 days	Meconium ileus	Exploratory laparotomy; Mikulicz ileostomy	Bronchopneumonia	Yes
921554	11	Constrictive pericarditis and myocarditis	Pericardiectomy	Myocardial failure secondary to idiopathic constrictive peri- carditis with myocarditis	Yes
925877	11	Fulminating ulcerative colitis; fistula in ano; severe electrolyte imbalance	Subtotal colectomy with ileostomy and mucous fistula	A. aerogenes septicemia and intracranial hemorrhage	No
(*Cancer Cases: 0 †Emergencies: 2 M.E.: Medical Examiner's Case: 7) FRACTURE: 14					
900555	82	Intertrochanteric fracture of femur, right; arteriosclerotic cardiovascular disease	Closed reduction and Jewett nail- ing intertrochanteric fracture, right femur	Myocardial infarction; cardiac arrest	No (M. E.)
901759	92	Intertrochanteric fracture of left femur	Jewett nailing intertrochanteric fracture, left femur	Thromboembolism pulmonary arteries; pneumonia	Yes
903575	74	Subcapital fracture of left hip	Smith-Petersen nailing, hip	Left cerebrovascular accident	No (M.E.)
902392	80	Subcapital fracture of hip	1. Knowles pinning, left hip 2. Gastrostomy	Bronchopneumonia; cerebral ar- teriosclerotic vascular disease	Yes (M.E.)
905257	90	Intertrochanteric fracture of left hip; perforated duodenal ulcer	1. Jewett nailing, left hip 2. Tracheotomy	Staphylococcal pneumonia; my- ocardial infarction; general- ized peritonitis secondary to perforated duodenal ulcer	Yes

TABLE II: OPERATIVE DEATHS, SURGICAL SPECIALTIES (PAVILION)—Continued

<i>Number</i>	<i>Age</i>	<i>Primary Diagnosis</i>	<i>Operation</i>	<i>Cause of Death</i>	<i>Autopsy</i>
873498	73	Intertrochanteric fracture of right hip	1. Jewett nailing, right hip 2. Burr holes	Cerebral vascular accident	No
905529	85	Subcapital fracture of right hip	1. Closed reduction and Knowles pinning 2. Excision femoral head and Austin-Moore prosthesis	Renal failure	No (M.E.)
744556	91	Subcapital fracture of right femur	†Knowles pinning of subcapital fracture, right femur	Myocardial infarction; pneumonia	Yes (M.E.)
926687	88	Subcapital fracture of femur	Closed reduction of subcapital fracture with internal fixation	Myocardial infarction	No
917684	78	Intertrochanteric fracture of right hip	1. Closed reduction with Jewett nailing, right hip 2. Gastrectomy 3. Split thickness skin graft to posterior thigh, bilaterally 4. Exploratory laparotomy with colostomy	Peritonitis	No
927962	73	Subcapital fracture of left femur	Knowles pinning, subcapital fracture, left femur	Coronary occlusion with myocardial infarction	Yes
924042	72	Old right intercapsular hip fracture	Tracheostomy	Pulmonary insufficiency	No
928106	94	Fracture of hip of left femur	Jewett nailing of intertrochanteric fracture, left femur	Cardiovascular accident	No (M.E.)
912538	71	Intertrochanteric fracture of left femur	†1. Tracheostomy 2. Incision and drainage, left hip abscess	Bronchopneumonia and suppurative pyelonephritis	Yes (M.E.)
NEUROSURGERY: 8					
(*Cancer Cases: 5 †Emergencies: 4 M.E.: Medical Examiner's Case: 0)					
902510	52	Subarachnoid hemorrhage due to rupture of anterior communicating artery aneurysm	1. Clipping of aneurysm under profound hypotension †2. Tracheostomy	Infarction of both frontal lobes of brain and thalamus	Yes

821982	56	*Lower cervical spinal cord compression due to metastatic carcinoma to cervical spine	†1. Cervical myelogram †2. Cervical laminectomy with decompression of spinal cord †3. Evacuation of wound hematoma †4. Tracheostomy	Transverse myelitis at C-7 level; probable medullary infarction and/or myocardial infarction	No
618778	48	*Malignant astrocytoma involving corpus callosum and both frontal lobes	1. Right carotid arteriogram 2. Ventriculogram 3. Right frontal craniotomy with partial excision of brain tumor 4. Ventriculogram 5. Tracheostomy	Brain stem compression and hemorrhage, cerebral edema	Yes
903508	60	*Carcinoma of colon metastatic to brain and lung	†1. Ventriculogram and exploratory craniotomy, tracheostomy 2. Left craniotomy with excision of left temporal lobe tumor	Bronchopneumonia	No
820654	24	*Melanoma of right thigh with widespread metastases	1. Thoracic myelography 2. Excision of intradural metastatic melanoma, T-5 level	Brain stem compression by posterior fossa metastases	Yes
906975	57	*Subdural hematoma, left; basal cell carcinoma invading left orbit	†1. Evacuation of left subdural hematoma 2. Craniotomy with evacuation of left subdural hematoma †3. Biparietal and right temporal burr holes †4. Tracheostomy 5. Pneumoencephalogram	Brain stem compression; bronchopneumonia	Yes
913155	3 months	Hydrocephalus	1. Ventriculography 2. Ventriculoperitoneal shunt	Ventriculitis	Yes
503625	71	Chronic right subdural hematoma	1. Evacuation of right subdural hematoma 2. Tracheostomy	Probable brain stem hemorrhage	No

TABLE II: OPERATIVE DEATHS, SURGICAL SPECIALTIES (PAVILION)—Continued

<i>Number</i>	<i>Age</i>	<i>Primary Diagnosis</i>	<i>Operation</i>	<i>Cause of Death</i>	<i>Autopsy</i>
OTOLARYNGOLOGY: 1					
(*Cancer Cases: 1		†Emergencies: 0	M.E.: Medical Examiner's Case: 0)		
890158	71	*Carcinoma of the left mandible; Mild pulmonary emphysema; right inguinal hernia	1. Biopsy of mandible 2. Partial resection of left mandible; left supradigastric neck dissection; tracheostomy	Brain and liver metastases	No
PLASTIC SURGERY: 1					
(*Cancer Cases: 1		†Emergencies: 0	M.E. Medical Examiner's Case: 0)		
212160	59	*Radionecrotic ulcer, large, of right posterior thorax; status post radiotherapy to right lung for carcinoma of lung, 1945	1. Unroofing and debridement of radionecrotic ulcer, back 2. Stage construction, pedicle flap of posterior thoracic area 3. Stage construction of thoracolumbar pedicle flap 4. Stage construction of posterior thoracic pedicle flap and excision of radionecrotic ulcer 5. Excision of necrotic edge of posterior thoracic flap and application of STSG 6. Excision of radionecrotic ulcer and closure of wound by transposition flap and application of STSG's	Massive left pulmonary embolism; No carcinoma of lung found at autopsy	Yes
UROLOGY: 9					
(*Cancer Cases: 5		†Emergencies: 0	M.E.: Medical Examiner's Case: 1)		
899615	79	Acute supportive pyelonephritis	Exploration of right kidney	Cardiac arrest	No (M.E.)
907908	7 weeks	Congenital nephrosis	Biopsy of right kidney	Septicemia, hypoproteinemia	Yes

887196	83	*Carcinoma of prostate	External urethral meatotomy and transurethral resection	Acute myocardial infarction	Yes
915593	64	Benign prostatic hypertrophy	1. Suprapubic cystostomy 2. Suprapubic prostatectomy with packing of prostatic fossa and bilateral ligation of hypogastric arteries	Pulmonary embolus	Yes
892130	64	*Carcinoma of the urinary bladder; bronchial asthma	1. Transurethral resection of bladder tumor 2. Radical cystectomy and ileal conduit 3. Small bowel resection	Acute pyelonephritis; bronchopneumonia	Yes
909856	63	*Carcinoma of the urinary bladder	1. Transurethral resection of bladder tumor 2. Radical cystectomy, left cutaneous ureterostomy 3. Incision and drainage of pelvic abscess 4. Transverse colostomy	Disseminated metastasis of carcinoma of bladder	Yes
310919	73	*Carcinoma of kidney	1. Left radical nephrectomy 2. Exploratory laparotomy with resection of jejunum 3. Exploratory laparotomy, lysis of adhesions, liver biopsy and gastrectomy	Metastatic carcinoma of kidney	No
85178	74	Left renal cyst	Decapsulation of renal cyst	Pulmonary embolus	No
897506	3	*Recurrent sarcoma of urinary bladder	Exploratory laparotomy with side-to-side ileo-transverse colostomy	Rhabdomyosarcoma	Yes

TABLE III
NONOPERATIVE DEATHS (PAVILION)

<i>Number</i>	<i>Age</i>	<i>Primary Diagnosis</i>	<i>Cause of Death</i>	<i>Autopsy</i>
GENERAL SURGERY: 8				
(*Cancer Cases: 4		†Emergencies: 0	M.E.: Medical Examiner's Case: 1)	
913718	42	*Carcinoma of stomach with abdominal carcinomatosis and metastases to lung and cervical lymph nodes	Carcinomatosis	Yes
548812	57	*Carcinoma of rectum, postabdominoperineal resection of rectum; metastases to left lung and cervical nodes	Perforation of esophagus due to metastatic carcinoma, with emphysema and bronchopleural fistula	No
894674	75	Diabetes mellitus	Diffuse arteriosclerosis with terminal renal failure and diabetes mellitus	No
352500	70	Laennec's cirrhosis with hepatic decompensation	Laennec's cirrhosis with hepatic decompensation	No
916855	73	*Recurrent carcinoma of stomach	Carcinoma of stomach	Yes
464218	61	*Carcinoma of esophagus	Bronchoesophageal fistula; aspiration pneumonia	Yes
928284	66	Third degree burns of 75% of body surface	Renal failure	Yes (M.E.)
435608	63	Diabetic gangrene of right foot	Myocardial infarction	No
FRACTURE: 3				
(*Cancer Case: 1		†Emergencies: 0	M.E.: Medical Examiner's Case: 1)	
920046	73	Subcapital fracture of femur	Coronary occlusion	Yes
780825	55	*Carcinoma of the rectum with metastases to C-3	Peritonitis	Yes
912528	85	Intertrochanteric fracture, right hip; atelectasis, right lower lobe; congestive heart failure—severe	Congestive heart failure	Yes (M.E.)

NEUROSURGERY: 2

(*Cancer Cases: 1	†Emergencies: 0	M.E.: Medical Examiner's Case: 0)	
209726	40	Subarachnoid hemorrhage due to rupture of right middle cerebral artery aneurysm	Yes
17969	49	*Glioblastoma multiforme, right temporal lobe	Yes
		Brain stem compression due to recurrence of tumor	

PLASTIC SURGERY: 2

(*Cancer cases: 1	†Emergencies: 0	M.E.: Medical Examiner's Case: 1)	
755029	68	*Carcinoma of mouth, metastases to liver and esophageal varices	Yes
925937	84	Third degree thermal burns, 15%, involving both lower extremities and back; generalized arteriosclerosis; arteriosclerotic heart disease	No (M.E.)
		Bleeding esophageal varices	
		Paroxysmal atrial tachycardia	

UROLOGY: 2

(*Cancer Cases: 1	†Emergencies: 0	M.E.: Medical Examiner's Case: 0)	
881396	78	*Carcinoma of urinary bladder; post vesicolithotomy and transurethral prostate resection; post myocardial infarction; severe angina pectoris	No
427468	81	Arteriosclerotic heart disease with congestive heart failure; urethral stricture	No
		Myocardial infarction	
		Septicemia with hypotension following urethral instrumentation; myocardial infarction	

TABLE IV

TOTAL PRIVATE DEATHS—1962				
Operative deaths.....	71	Autopsies.....	55 (including 4 Medical Examiner's Cases).....	64%
Nonoperative deaths.....	15	No autopsies.....	31 (including 3 Medical Examiner's Cases).....	36%
	86		86	
Cancer cases in which cancer caused death.....	20	Deaths following operative emergencies.....	2	
Cancer cases with other causes of death.....	25	Deaths following nonoperative emergencies.....	0	
Total Cancer Cases.....	45	Total Deaths Following Emergencies.....	2	

OPERATIVE DEATHS, GENERAL SURGERY (PRIVATE)

<i>Number</i>	<i>Age</i>	<i>Primary Diagnosis</i>	<i>Operation</i>	<i>Cause of Death</i>	<i>Autopsy</i>
DEATHS RELATED TO GASTROINTESTINAL DISEASES: 14					
(*Cancer Cases: 9		M.E.: Medical Examiner's Case: 0)			
533176	62	*Carcinoma of rectum	1. Anterior resection of recto-sigmoid 2. Transrectal incision and drainage of pelvic abscess 3. Tracheostomy	Generalized peritonitis; bronchopneumonia	Yes
895781	68	Polyps of colon; hypertensive cardiovascular disease	Multiple polypectomies	Myocardial infarction	No
825000	61	*Abdominal carcinomatosis secondary to carcinoma of the stomach	Biopsy of nodule on jejunum, incision of polyethylene catheter into mesenteric artery	Carcinomatosis	Yes
453987	55	*Carcinoma of rectosigmoid colon; penicillin allergy	Abdominoperineal coloproctectomy	Probable subhepatic abscess	No

907121	64	*Carcinoma of colon with metastasis and large bowel obstruction; benign prostatic hypertrophy; emphysema	1. Cecostomy and appendectomy 2. Exploratory laparotomy; biopsy of liver; transverse colostomy	Carcinoma of colon	No
912136	62	*Carcinoma of stomach with abdominal carcinomatosis	Exploratory laparotomy	Carcinoma of stomach	No
755838	62	*Lymphoma of stomach with metastases	Exploratory laparotomy	Cardiac arrest	Yes
907196	32	Ulcerative colitis; status post bleeding steroid ulcer	Partial ascending and transverse colectomy with ascending transverse colostomy	Bleeding gastric ulcer	Yes
613617	59	*Gangrene, jejunum, secondary to small bowel obstruction, caused by adhesions; carcinoma of prostate with metastasis to bone; Laennec's cirrhosis	Exploratory laparotomy; lysis of adhesions; resection of gangrenous small bowel with end to end anastomosis	Aspiration pneumonia; renal failure; liver failure	No
901290	65	Gastrointestinal hemorrhage, secondary to chronic duodenal ulcer; hiatalus hernia	Subtotal gastrectomy and gastrojejunostomy; repair of hiatus hernia	Pulmonary embolus	Yes
545194	61	*Carcinoma of right colon; post-operative splinterotomy for recurrent pancreatitis	Radical right hemicolectomy	Acute hepatitis; renal failure; electrolyte imbalance	No
697680	63	Bleeding marginal ulcer	Subtotal gastric resection and vagotomy	Peritonitis	No
906395	63	Gastrointestinal bleeding of undetermined etiology; status post resection of aortic aneurysm with replacement by Teflon prosthesis; status post partial gastrectomy for duodenal ulcer	Partial gastrectomy; gastrojejunostomy; duodenotomy, jejunotomy and splenectomy	Massive gastrointestinal hemorrhage	No
929674	60	*Gastric ulcer; carcinoma metastatic to liver	Plication of bleeding gastric ulcer	Massive gastrointestinal hemorrhage	Yes

TABLE IV: OPERATIVE DEATHS, GENERAL SURGERY (PRIVATE)—Continued

<i>Number</i>	<i>Age</i>	<i>Primary Diagnosis</i>	<i>Operation</i>	<i>Cause of Death</i>	<i>Autopsy</i>
DEATHS RELATED TO BILIARY TRACT, PANCREAS, AND LIVER: 5					
(*Cancer Cases: 2		†Emergencies: 0	M.E.: Medical Examiner's Case: 0)		
878226	72	*Carcinoma of the pancreas	Exploratory laparotomy and cholecystojejunostomy	Bronchopneumonia	No
870939	66	Chronic cholecystitis with cholelithiasis; post subtotal gastrectomy	Cholecystectomy	Acute myocardial infarction; rupture of spleen	No
901815	78	Chronic cholecystitis with acute exacerbation	Common duct exploration, duodenotomy and cholecystectomy	Acute massive necrosis of liver	Yes
910807	64	*Carcinomatosis, secondary to carcinoma of pancreas; diabetes mellitus	Exploratory laparotomy; biopsy of liver	Carcinomatosis	No
678633	89	Chronic cholecystitis and cholelithiasis with acute exacerbation and gram negative septicemia; arteriosclerotic cardiovascular disease	1. Cholecystectomy and insertion of catheter in common bile duct 2. Common duct exploration and removal of three calculi	Myocardial infarction	Yes
DEATHS RELATED TO CARDIOVASCULAR AND VASCULAR DISEASES: 6					
(*Cancer Cases: 1		†Emergencies: 1	M.E.: Medical Examiner's Case: 0)		
926704	55	Complete arteriosclerotic segmental obstruction of left subclavian artery	Left subclavian endarterectomy	Prolonged anorexia and cardiac arrest	No
430485	70	Arteriosclerosis obliterans; anterior tibial syndrome	1. Femoral arteriotomy and embolectomy 2. Debridement of ischemic ulcer of right leg 3. Debridement of ischemic ulcer 4. Split thickness skin graft to right leg	Pneumonia	No
914224	77	Acute thrombosis of left femoral artery; abdominal pain; arteriosclerotic heart disease; gastric ulcer	Femoral arteriotomy with removal of thrombus	Peritonitis secondary to perforated gastric ulcer	Yes

25372	45	Arteriosclerosis obliterans of abdominal aorta; arteriosclerotic coronary artery disease with angina pectoris	Abdominal aortic replacement, grafting from below origin of renal arteries to right common iliac and left external iliac arteries; bilateral lumbar sympathectomy and splenectomy	Myocardial infarction	Yes
905047	72	Abdominal aortic and left common iliac aneurysm; arteriosclerotic heart disease with calcific aortic stenosis; right bundle branch block	1. Resection of abdominal aortic and left common iliac artery †2. Thrombectomy of prosthesis, iliofemoral bypass	Infarction of small bowel	Yes
372026	73	*Aneurysm of hepatic artery; malignant lymphoma; bleeding duodenal ulcer	1. Resection of carcinoma of jejunum; ileosigmoidostomy 2. Exploratory laparotomy; gastrotomy; vagotomy; right hemicolectomy; closure of colostomy; jejunostomy 3. Colostomy, descending colon 4. Gastrotomy; jejunotomy; resection of cutaneous gastroduodenal fistula and transverse colon	Gastrointestinal hemorrhage and rupture of hepatic artery	Yes

DEATHS RELATED TO ESOPHAGUS AND LUNGS: 3

(*Cancer Cases: 2	†Emergencies: 0	M.E.: Medical Examiner's Case: 0)			
925323	76	*Carcinoma of the esophagus; benign prostatic hypertrophy; pulmonary emphysema	1. Gastrotomy 2. Exploration of the cervical esophagus; tracheostomy	Carcinoma of the esophagus with aspiration pneumonia	Yes
478764	59	Spontaneous perforation of esophagus; chronic rheumatic arthritis	Right posterior mediastinotomy	Pulmonary embolus	No
868800	49	*Metastatic carcinoma of lung; pulmonary insufficiency	Examination under anesthesia; dilatation and curettage	Pulmonary insufficiency	Yes

DEATHS RELATED TO MISCELLANEOUS CONDITIONS: 7

(*Cancer Cases: 3 †Emergencies: 0 M.E.: Medical Examiner's Cases: 0)				
909791	73	*Metastatic cystosarcoma phyllodes	Left pleural biopsy	Metastatic cystosarcoma phyllodes
				No

TABLE IV: OPERATIVE DEATHS, GENERAL SURGERY (PRIVATE)—Continued

<i>Number</i>	<i>Age</i>	<i>Primary Diagnosis</i>	<i>Operation</i>	<i>Cause of Death</i>	<i>Autopsy</i>
915916	64	Multiple enterocutaneous fistulae; status post radical cystectomy with ileo-conduit for cancer of bladder; severe malnutrition	Closure of small bowel fistula; sigmoid colostomy; lysis of adhesions	Myocardial infarction	Yes
916322	51	*Retropertitoneal metastatic carcinoma, primary site undetermined; duodenal fistula; vertebral invasion and retropertitoneal abscess	1. Incision and drainage of retropertitoneal abscess 2. Closure of duodenal fistula; cholecystostomy; biopsy of tumor	Renal failure	Yes
309298	42	Necrosis of jejunum and many associated perforations; acute peritonitis; wrist lacerations secondary to attempted suicide	Resection of proximal jejunum and terminal ileum; jejunojejunostomy and ileocolostomy	Acute peritonitis (Proteus, Cl Welchii)	Yes
899575	49	*Metastatic carcinoma of breast; anemia secondary to carcinoma	Bilateral oophorectomy	Pulmonary insufficiency	No
901257	39	Phaeochromocytoma; hypertension	Excision of phaeochromocytoma	Acute myocardial infarction	Yes
721778	61	Bleeding marginal ulcer; diabetes mellitus; hypertensive cardiovascular disease with mitral insufficiency and enlarged heart	Resection of stomach with reconstruction of gastroenterostomy	Bleeding marginal ulcer	Yes

TABLE V

OPERATIVE DEATHS, SURGICAL SPECIALTIES (PRIVATE)

<i>Number</i>	<i>Age</i>	<i>Primary Diagnosis</i>	<i>Operation</i>	<i>Cause of Death</i>	<i>Autopsy</i>
PEDIATRIC SURGERY: 4					
(*Cancer Cases: 0		†Emergencies: 0	M.E.: Medical Examiner's cases: 2)		
906307	3 days	Meconium peritonitis; small bowel atresia	1. Resection of gangrenous ileum and Mikulicz extirpation 2. Revision of ileal stump of Mikulicz	Peritonitis; infarction of liver	Yes

911513	3 months	Congenital heart disease with atresia of pulmonary valve and ductus arteriosus	1. Intrapericardial aortic pulmonary shunt with Teflon graft 2. Closure of abdominal evisceration 3. Exploratory cardiotomy; creation of atrial septal defect	Cardiac arrest	Yes
921925	2 months	Transposition of great vessels with pulmonary atresia	Intrapericardiac aorticopulmonary shunt	Myocardial and respiratory failure	Yes (M.E.)
921974	4 weeks	Infundibular pulmonic stenosis with marked left and right ventricular hypertrophy	Exploration of pulmonary valve	Respiratory and cardiac failure	Yes (M.E.)
FRACTURE: 2					
(*Cancer Cases: 0 †Emergencies: 0 M.E.: Medical Examiner's Cases: 2)					
906573	90	Intracapsular fracture; chronic brain syndrome due to cerebral arteriosclerosis; decubitus ulcers	Austin-Moore prosthetic replacement	Coronary occlusion	Yes (M.E.)
665542	72	Nonunion of fracture of distal femur, right, with chronic abscess; arteriosclerotic cardiovascular disease	Open mid-thigh amputation	Septicemia; adrenal insufficiency; bilateral subdural hematoma	Yes (M.E.)
NEUROSURGERY: 16					
(*Cancer Cases: 11 †Emergencies: 1 M.E.: Medical Examiner's Cases: 1)					
602902	58	*Glioblastoma multiforme, left frontal lobe	1. Left carotid arteriogram 2. Partial resection of left frontal lobe tumor	Respiratory arrest, secondary to increased intracranial pressure	Yes
901044	68	*Glioblastoma multiforme, left temporal lobe	1. Left carotid arteriogram 2. Pneumoencephalogram 3. Left craniotomy with subtotal removal of temporal lobe glioma	Cerebral edema, brain stem compression	Yes
632365	62	*Glioblastoma multiforme, right frontal lobe	1. Right carotid arteriogram 2. Partial excision of right frontal tumor	Respiratory arrest, secondary to increased intracranial pressure	Yes

TABLE V: OPERATIVE DEATHS, SURGICAL SPECIALTIES (PRIVATE)—Continued

<i>Number</i>	<i>Age</i>	<i>Primary Diagnosis</i>	<i>Operation</i>	<i>Cause of Death</i>	<i>Autopsy</i>
357612	68	*Glioblastoma multiforme, right frontal lobe	1. Pneumoencephalogram 2. Right frontal lobectomy 3. Tracheostomy	Brainstem and cerebral edema	Yes
910902	37	*Glioma of corpus callosum, probably glioblastoma multiforme	†1. Ventriculogram ‡2. Tracheostomy	Brainstem compression	No
848310	60	*Neurogenic sarcoma	1. Cervical myelogram 2. Excision of spinal cord tumor 3. Tracheostomy	Pressure of brain stem, secondary to intracranial spread of tumor	No
901095	68	Subarachnoid hemorrhage due to rupture of aneurysm of left posterior communicating artery; left temporal hematoma	1. Ventriculogram 2. Left carotid arteriogram 3. Left craniotomy with clipping of aneurysm and evacuation of hematoma 4. Tracheostomy	Massive cerebral edema and necrosis, brain stem compression	Yes
908505	51	*Acoustic neurinoma, left; status post resection parotid carcinoma, right; status post resection parotid carcinoma metastatic to lung (partial lobectomy)	1. Excision of left acoustic neurinoma 2. Tracheostomy	Irreversible hypotension; medullary vasomotor failure	Yes
906319	43	Aneurysm of anterior communicating artery with rupture and subarachnoid hemorrhage	1. Carotid arteriography 2. Aneurysmorrhaphy with use of profound hypothermia and car-diopulmonary bypass	Ventricular fibrillation and cardiac failure	No (M.E.)
907151	9	Astrocytoma of third ventricle	1. Ventriculogram and craniotomy with biopsy of tumor 2. Torkildsen shunt 3. Insertion of ventricular catheter 4. Tracheostomy	Brain stem compression	Yes
802932	67	Recurrent adenoma of pituitary with hemorrhage; acromegaly	1. Biparietal burr holes and insertion of ventricular catheter 2. Tracheostomy	Massive subarachnoid hemorrhage	Yes

919067	1 month	*Craniopharyngioma; hydrocephalus; carcinoma of liver	1. Ventriculography 2. Partial excision of craniopharyngioma 3. Ventriculography 4. Torkildsen shunt Hypophysectomy	Brain tumor	Yes
888159	31	*Metastatic breast carcinoma	Ventriculopleural shunt	Hypotension and intracerebral bleeding	Yes
922403	62	*Meningiosarcoma, right frontal lobe; hypertension	Craniotomy	Brain stem damage	Yes
929656	6 months	*Malignant brain tumor, left cerebral hemisphere	1. Left carotid arteriogram 2. Pneumoencephalogram 3. Removal of bone plate 4. Pneumoencephalogram	Cardiac arrest	Yes
867624	65	Recurrent brain tumor; wound infection		Recurrent brain tumor	Yes

PLASTIC SURGERY: 1

(*Cancer Case: 1		†Emergencies: 0	M.E.: Medical Examiner's Case: 0)		
28178	67	*Recurrent basal cell carcinoma of face, involving nose, upper lip, and mouth; hypertensive cardiovascular disease	1. Radical excision of basal cell carcinoma of face 2.. Split thickness graft of wound of face	Cardiac arrest	Yes

UROLOGY: 13

(*Cancer Cases: 6		†Emergencies: 0	M.E.: Medical Examiner's Case: 0)		
516676	63	Pyelonephritis (acute and chronic); septicemia; uremia	Suprapubic cystostomy	Uremia	Yes
703019	59	Papillary tumor of left renal pelvis; status post cerebral vascular accident	1. Cystoendoscopy and retrograde pyelogram 2. Transurethral resection of prostate gland 3. Left nephroureterectomy	Pneumonia and uremia	No

TABLE V: OPERATIVE DEATHS, SURGICAL SPECIALTIES (PRIVATE)—Continued

<i>Number</i>	<i>Age</i>	<i>Primary Diagnosis</i>	<i>Operation</i>	<i>Cause of Death</i>	<i>Autopsy</i>
764039	67	*Carcinoma of rectum; bilateral hydronephrosis secondary to ureteral obstructions from metastatic carcinoma	1. Abdominoperineal coloproctectomy 2. Bilateral nephrostomies	Metastatic carcinoma of rectum; renal failure	No
833902	66	Pulmonary tuberculosis, cavitory, active; tuberculosis of colon and retroperitoneal space; status post total cystectomy and bilateral ureterosigmoidostomies for carcinoma of the bladder	Left cutaneous ureterostomy and drainage of right lower quadrant retroperitoneal abscess	Pulmonary tuberculosis, active; tuberculosis of colon with retroperitoneal abscess	Yes
900061	78	Septicemia (aerobacter aerogenes and enterococcus); Staphylococcal pneumonia; Staphylococcal enterocolitis; cerebral arteriosclerosis; benign prostatic hypertrophy	Suprapubic cystostomy	Staphylococcal pneumonia	No
807857	68	*Carcinoma of bladder, recurrent; arteriosclerotic cardiovascular disease; status post subtotal thyroidectomy with hypoparathyroidism	Radical cystectomy and ileal conduit	Cardiac arrest	Yes
910079	74	Bilateral ureterolithiasis; arteriosclerotic heart disease; hypertension	Bilateral ureterolithotomy	Renal failure; electrolyte imbalance; cardiac arrhythmia	No
532217	65	*Carcinoma of prostate; arteriosclerotic heart disease with angina	Transurethral resection of prostate	Coronary occlusion	Yes
587068	72	*Carcinoma of prostate; arteriosclerotic cardiovascular disease; diverticulosis of colon; chronic cholecystitis	Suprapubic cystostomy	Metastatic carcinoma of prostate; bronchopneumonia	Yes
861045	75	Benign prostatic hypertrophy and acute prostatitis; left renal lithiasis; chronic pyelonephritis; septicemia; arteriosclerotic cardiovascular disease with old cerebral vascular accident	1. Cystoscopy and perineal needle biopsy 2. Suprapubic cystostomy	Renal failure and cardiovascular collapse	Yes

<i>Number</i>	<i>Age</i>	<i>Primary Diagnosis</i>	<i>NONOPERATIVE DEATHS (PRIVATE)</i>	<i>Cause of Death</i>	<i>Autopsy</i>
927268	2½	Left ureterocele; bladder neck obstruction; bladder diverticulum; right hydronephrosis; hypoplastic left kidney	1. Cystoendoscopy and cystogram 2. Excision of left ureterocele and bladder diverticulum with re-implantation of left ureter into bladder	Hemorrhage, shock and possible electrolyte imbalance	Yes
308771	76	*Carcinoma of the prostate gland; uremia, Staphylococcal bronchopneumonia	1. Radical perineal prostatectomy 2. Bilateral nephrostomy	Staphylococcal bronchopneumonia	Yes
906537	73	*Carcinoma of prostate with bilateral hydronephrosis; arteriosclerotic heart disease	1. Bilateral nephrostomies 2. Biopsy of prostate and bilateral orchiectomies	Myocardial infarction	No
TABLE VI					
GENERAL SURGERY: 12					
(*Cancer Cases: 8 †Emergencies: 0 M.E.: Medical Examiner's Case: 0)					
406686	67	Abdominal aortic aneurysm; myocardial infarction	Acute myocardial infarction		Yes
875193	60	*Recurrent carcinoma of hepatic flexure with carcinomatosis	Abdominal carcinomatosis		Yes
763435	75	Anemia secondary to upper gastrointestinal bleeding; arteriosclerotic cardiovascular disease; status post: coronary occlusion, subtotal gastrectomy, transurethral resection of prostate, exploratory laparotomy for acute pancreatitis	Myocardial infarction		Yes
911542	80	Acute hemorrhagic pancreatitis; arteriosclerotic heart disease	Acute hemorrhagic pancreatitis		Yes
131263	51	*Recurrent carcinoma of the colon	Carcinoma of the colon		Yes
871310	59	*Carcinoma of left breast, metastatic to left axilla, right breast and lungs	Metastatic carcinoma of the breast		No
897468	41	*Carcinoma of breast with widespread metastases to bone, liver and brain	Carcinomatosis		No
910974	60	*Metastatic cancer of gall bladder; benign prostatic hypertrophy	Carcinomatosis		No

TABLE VI: NONOPERATIVE DEATHS (PRIVATE)—Continued

<i>Number</i>	<i>Age</i>	<i>Primary Diagnosis</i>	<i>Cause of Death</i>	<i>Autopsy</i>
800367	79	*Metastatic cancer of esophagus	Carcinomatosis	No
403013	77	*Abdominal carcinomatosis secondary to carcinoma of pancreas	Carcinomatosis	No
923656	67	Abdominal aortic aneurysm with rupture; arteriosclerotic cardiovascular disease	Rupture of aortic aneurysm	No
858923	55	*Carcinoma of the head of the pancreas; chronic lymphatic leukemia; status post cholecystoduodenostomy	Renal failure; generalized leukemia	Yes
FRACTURE: 1				
(*Cancer Case: 0		†Emergencies: 0	M.E.: Medical Examiner's Case: 1)	
909888	93	Fracture managed conservatively by Russell's traction	Pulmonary embolus or myocardial infarction	No (M.E.)

UROLOGY: 2

(*Cancer Cases: 2 †Emergencies: 0 M.E.: Medical Examiner's Case: 0)

911505	60	*Carcinoma of prostate with generalized metastases; pneumonia	Carcinoma of prostate with metastases and cachexia	Yes
851321	81	*Carcinoma of the left kidney with metastases	Carcinomatosis; bronchopneumonia	Yes

TABLE VII

TOTAL DEATHS ON SEMIPRIVATE TEACHING SERVICE—1962

Operative deaths.....	20	Autopsies.....	19	78.1%
Nonoperative deaths.....	4	No autopsies.....	5	
		24		
Cancer cases in which cancer caused death.....	6	Deaths following operative emergencies.....	6	
Cancer cases with other causes of death.....	4	Deaths following nonoperative emergencies.....	0	
Total cancer cases.....	10	Total deaths following emergencies.....	6	

OPERATIVE DEATHS, GENERAL SURGERY (SEMIPRIVATE TEACHING SERVICE)

Number	Age	Primary Diagnosis	Operation	Cause of Death	Autopsy
(*Cancer cases: 7 †Emergencies: 6 M.E.: Medical Examiner's Cases: 1)					
49352	74	*Recurrent carcinoma of cecum with peritoneal, liver and pulmonary metastases; arteriosclerotic heart disease	Insertion of catheter, hepatic artery	Hepatic and renal failure	Yes
897436	55	*Carcinoma of pancreas	Exploratory laparotomy	Carcinomatosis	Yes
900192	66	†Ulcerative colitis with perforation of the sigmoid colon; arteriosclerotic cardiovascular disease with congestive heart failure	†1. Transverse colostomy 2. Exploratory laparotomy and biopsy of sigmoid colon †3. Tracheostomy	Pulmonary embolus; Staphylococcal bronchopneumonia	No
906068	67	†Ruptured aneurysm of abdominal aorta	†1. Exploratory laparotomy and thoracotomy with clamping of thoracic aorta; cardiac massage †1. Excision infarcted segment of cecum, cecostomy and incidental appendectomy	Ruptured aneurysm, abdominal aorta	Yes
898845	64	Segmental infarction of the cecum; arteriosclerotic cardiovascular disease	†1. Neotransverse colostomy 2. Division of ileum distal to ileotransverse colostomy and creation of mucous fistula 3. Open cardiotomy; repair of tetralogy of Fallot †2. Evacuation hematoma mediastinum	Superior mesenteric artery occlusion	Yes
420062	22	Tetralogy of Fallot; fracture of sacrum	1. Open cardiotomy; repair of tetralogy of Fallot †2. Evacuation hematoma mediastinum	Cerebral anoxia	Yes
904877	37	*Carcinoma of the ovary with liver, peritoneal and pelvic metastases; chronic cholecystitis and cholelithiasis	1. Exploratory laparotomy and biopsy of abdominal tumor	Carcinomatosis	No
908910	32	Chronic ulcerative colitis; rectovaginal fistula	Tracheostomy	Pulmonary artery thrombosis; malnutrition	Yes
907984	70	*Carcinomatosis, primary site unknown, diverticulitis	Exploratory laparotomy with liver biopsy	Generalized carcinomatosis	Yes

TABLE VII: OPERATIVE DEATHS, GENERAL SURGERY (SEMPRIVATE TEACHING SERVICE)—Continued

<i>Number</i>	<i>Age</i>	<i>Primary Diagnosis</i>	<i>Operation</i>	<i>Cause of Death</i>	<i>Autopsy</i>
703446	56	Rheumatic heart disease with recurrent mitral stenosis; myoma of uterus; nodular goiter	Cardiopulmonary bypass and open mitral valvulotomy	Heart failure; renal failure	Yes
679200	69	Arteriosclerotic cardiovascular disease with aneurysm of abdominal aorta	Exploratory laparotomy	Renal failure	Yes
919057	61	*Carcinoma of left lung	1. Bilateral scalene node biopsy 2. Left pneumonectomy	Hepatic failure	No
881360	56	Arteriosclerosis, abdominal aorta; arteriosclerotic aneurysm, abdominal aorta; diabetes mellitus	Excision of abdominal aneurysm; bilateral aortico-popliteal bypass graft	Myocardial infarction	Yes
913896	49	Rupture of abdominal aorta; arteriosclerosis of abdominal aorta; post aortico-iliac graft; angina pectoris	1. Exploratory laparotomy 2. Thoracotomy 3. Cardiac massage	Cardiac arrest	Yes
786303	70	Lacunar's cirrhosis with portal hypertension and esophageal varices	†1. Tracheotomy †2. Portacaval shunt	Renal failure; hepatic failure; gastric and esophageal ulcers with bleeding	Yes
829905	59	Acute appendicitis with perforation	†1. Appendectomy with drainage †2. Tracheotomy	Renal failure	Yes
921921	72	*Carcinoma of the esophagus; pulmonary emphysema; benign prostatic hypertrophy	Exploratory thoracotomy	Respiratory failure	No
758699	54	Urachal cyst	Excision of urachal cyst and sinus, open cardiac massage	Cardiac arrest	Yes
809349	68	*Recurrent carcinoma of rectum with abdominal carcinomatosis and intestinal obstruction	Exploratory laparotomy; biopsy of peritoneal tumor implant	Intestinal obstruction due to cancer	No
905322	43	*Carcinoma of right adrenal; cholelithiasis	Excision of right adrenal tumor; open cardiac resuscitation	Cardiac arrest	Yes (M.E.)

TABLE VIII
NONOPERATIVE DEATHS, GENERAL SURGERY (SEMIPRIVATE TEACHING SERVICE)

<i>Number</i>	<i>Age</i>	<i>Primary Diagnosis</i>		<i>Cause of Death</i>	<i>Autopsy</i>
(*Cancer Cases: 3 †Emergencies: 0 M.E.: Medical Examiner's Case: 0					
835206	68	*Recurrent carcinoma ascending colon; arteriosclerotic cardiovascular disease with aneurysm, abdominal aorta	Carcinomatosis		Yes
922869	61	Chronic bronchitis; emphysema; status asthmaticus	Status asthmaticus with acute myocardial infarction		Yes
837463	63	*Recurrent carcinoma of colon with liver, peritoneal and pleural metastases; rectal bleeding due to recurrent cancer of colon	Carcinoma of the liver		Yes
866149	44	*Metastatic carcinoma of stomach	Carcinomatosis and hepatic failure		Yes

